Review of Chronic Disease Management Local Enhanced Services Programme in NHSGGC

January 2014

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Executive Summary

This paper reviews NHS Greater Glasgow & Clyde's current portfolio of five Local Enhanced Services (LES) for chronic disease management (CDM) in the wider context of its population needs. Its principal aim was to recommend changes to the existing CDM programme in primary care to ensure that the programme contributes to high value healthcare system that helps to shift the balance of care towards prevention and anticipatory care, rather than reactive, emergency care. The review had seven components: stakeholder consultation; gap analysis of existing LTC pathways; an epidemiological needs assessment; analysis of existing LES CDM programme clinical data to date; review of effectiveness evidence; review of electronic decision support templates; and appraisal of risk stratification as a potential strategy.

The review makes six recommendations.

***Recommendation 1**:* The CDM redesign programme initiated in 2012 should continue to improve the following six elements:

i. Workforce expertise and skill
ii. Computerised decision support with strong MCN input
iii. High quality, coordinated education and support to patients
iv. CDM care delivery in primary care as part of a wider, coordinated programme
v. Continuous audit and quality improvement to inform workforce support needs
vi. Tackle variations in performance using approaches such as the 'critical control point' analysis used in Keep Well and NW COPD work

***Recommendation 2**:* The size and characteristics of additional population subgroups (beyond the current set of five chronic diseases) who would benefit most from structured CDM should be defined, explicitly prioritising conditions that make the biggest contribution to our total burden of disease and where potential interventions have strong evidence of clinical and cost effectiveness.

***Recommendation 3**:* Risk stratification should guide prioritisation of patients who require more frequent or intensive CDM, recognising significant caveats around risk stratification as a healthcare strategy.

***Recommendation 4**:* The CDM programme delivered in primary care should be integrated into a programme of accessible, clinically effective and evidence based community services

***Recommendation 5**:* A coherent, functioning 'whole system' service directory should be established to support consistent delivery of CDM across primary, secondary, social care and other community services.

***Recommendation 6**:* Irrespective of future developments and changes in GMS contracting arrangements, the elements of high quality CDM, as outlined in the above recommendations, should be implemented.

1. Current position

1.1 Current context: national GMS contracting mechanisms

The General Medical Services (GMS) contract, introduced on 1 April 2004, categorised the clinical work of general practice into one of three service categories: Essential, Additional or Enhanced Services. Until October 2012, the GMS contract was a single UK-wide contract, to which devolved nations traditionally only made minor modifications. However, following failure of the pan-UK negotiating process to deliver a single contract specification for 2013/14, each of the four Health Departments in the UK now engages directly with its own GP Committee and it is likely that there will be substantial redesign of contracting arrangements in the future. Enhanced Services (ES) provide Health Boards with a mechanism to improve patient care, increase choice or achieve greater integration across primary and secondary care. Directed Enhanced Services (DES) have nationally agreed specifications and Boards are required to commission these for all patients. If a Practice chooses not to deliver a DES, then the Board must deliver the service to patients in another way. National Enhanced Services (NES) have guideline specifications and prices. Boards are free to commission these or not, according to local need and can amend the guideline specifications and prices. Local Enhanced Services (LES) are entirely locally determined.

1.2 Current context: local

The current (2013/14) programme of Enhanced Services in NHSGGC supports six main types of interventions, as well as the chronic disease management (CDM) programme, they include addictions services, contraceptive services and services aiming to improve primary/secondary care integration (Table 1).

Table 1: Current (2012/13) GMS Enhanced Services in NHSGGC

Directed Enhanced Services	National Enhanced Services	Local Enhanced Services
• Extended hours • Minor surgery • Palliative care	• Drug misuse • IUCD • Near patient testing	• Alcohol screening/brief intervention • Asylum Seekers • CDM: CHD • CDM: COPD • CDM: Diabetes • CDM: Stroke/TIA • Contraceptive implants • Drug Misuse subcontract • Heart failure • Keep Well • Medicines management • Pre-chemotherapy phlebotomy

The CDM programme evolved from a pilot programme initiated in 1999: 'Glasgow's Responsive Angina Secondary Prevention Programme' (GRASPP), targeting patients with newly diagnosed coronary heart disease (CHD). The GRASPP programme became a LES in 2004 with the advent of the new GMS contract. CHD, Type 2 Diabetes and Stroke/Transient Ischaemic Attack (TIA) LES were commissioned in Greater Glasgow from April 2004, extending to Clyde in 2009/10 (Diabetes); West Dunbartonshire & Inverclyde in 2010/11; and Renfrewshire in April 2011 (CHD). Finally, LES programmes for Chronic Obstructive Pulmonary Disease (COPD) and Left Ventricular Systolic Dysfunction (LVSD) were commissioned across the whole NHSGGC area from November 2010.

The GMS contract should be set in the wider context of NHSGGC's current review of all clinical services (CSR) which is considering how these should be developed to meet the current and future needs of our population. A specific subgroup on CDM was established, which has partly informed the focus and approach for this review.

1.3 Current context: epidemiological

NHS Greater Glasgow and Clyde (NHSGGC) is the largest Health Authority in the UK, with a resident population of some 1.2 million people. Its life expectancy, health status, risk behaviours and social determinants of health all fall well below the Scottish average (Figure 1).

Figure 1: NHSGGC Health Profile[1]

Greater Glasgow & Clyde Health Board Health Summary

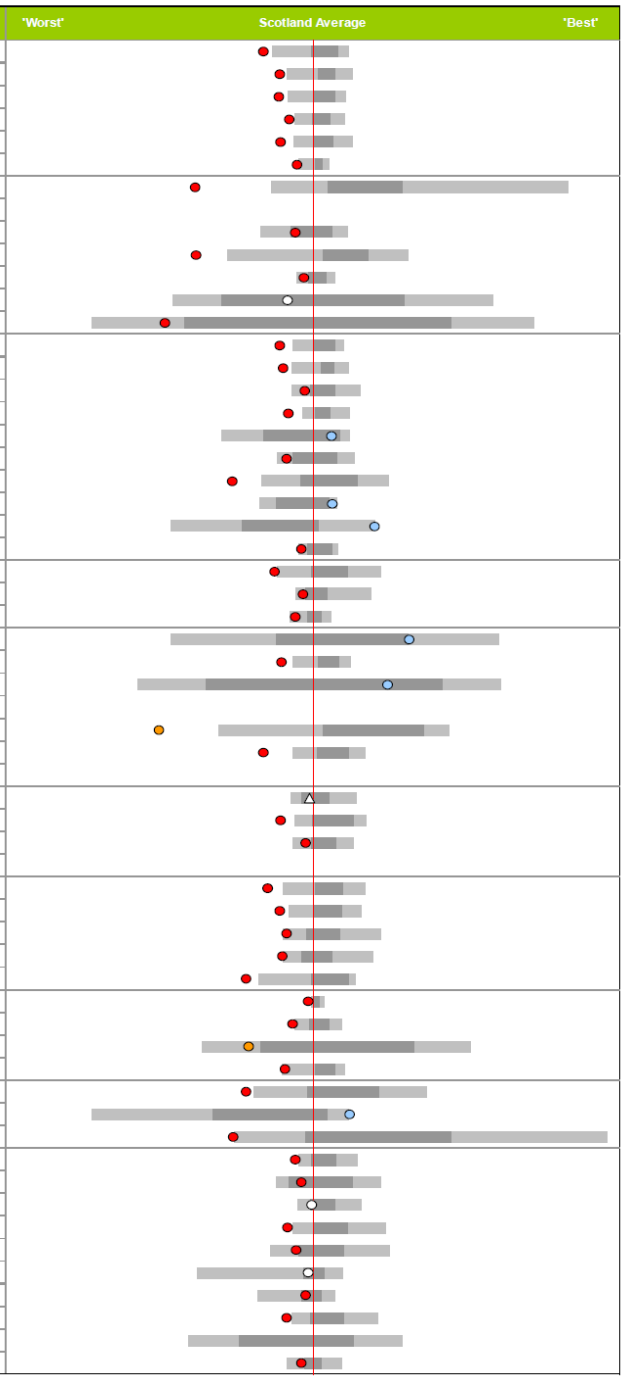
This chart compares the local value for each indicator to the Scottish average and range for all Health Boards.

- Statistically significantly 'worse' than Scottish average
- Statistically not significantly different from Scottish average
- Statistically significantly 'better' than Scottish average
- Statistically significant difference compared to Scottish average
- No significance can be calculated

'Worse' Area ← Scotland Average → 'Better' Area

5th Percentile 25th Percentile 75th Percentile 95th Percentile

Domain	Indicator	Number	Measure	Type	Scot. Average
Life Expectancy & Mortality	1 Life expectancy - males [1]	n/a	72.1	yrs	74.5
	2 Life expectancy - females [1]	n/a	78.1	yrs	79.5
	3 Deaths all ages [2]	40,236	814.2	sr	707.8
	4 Early deaths from coronary heart disease (< 75s) [2]	2,597	70.3	sr	57.2
	5 Early deaths from cancer (< 75s) [2]	5,876	156.1	sr	134.7
	6 Early deaths from cerebrovascular disease (< 75s) [2]	928	24.2	sr	18.7
Behaviours	7 Smoking attributable deaths [2]	12,321	30.6	%	24.1
	8 Smoking prevalence [3]	n/a		%	25.0
	9 Patients hospitalised with alcohol conditions [2]	47,908	1,225	sr	1,088
	10 Deaths from alcohol conditions [1]	4,039	62.8	sr	46.4
	11 Patients hospitalised with drug related conditions [2]	3,781	104.8	sr	85.1
	12 Active travel to work [3]	n/a	13.0	%	14.0
	13 Sporting participation [3]	n/a	69.0	%	73.0
Ill Health & Injury	14 Patients registered with cancer [1]	32,197	443.4	sr	412.6
	15 Patients hospitalised with COPD [2]	10,039	217.0	sr	158.6
	16 Patients hospitalised with coronary heart disease [2]	15,332	359.0	sr	347.0
	17 Patients hospitalised with cerebrovascular disease [2]	9,528	200.2	sr	173.8
	18 Patients hospitalised with asthma [2]	13,487	362.0	sr	472.9
	19 Patients hospitalised as an emergency [2]	276,157	6,921.3	sr	6,378.9
	20 Patients (65+) with multiple hospitalisations [2]	33,034	5,601.6	sr	4,607.6
	21 Road traffic accident casualties [2]	2,209	61.1	sr	79.4
	22 Patients hospitalised after a fall in the home (65+) [2]	3,027	439.0	sr	710.4
	23 Prevalence of diabetes	52,191	3.8	sr2	3.5
Mental Health	24 Patients prescribed drugs for anxiety/depression/psychosis	140,960	10.9	%	9.7
	25 Patients with a psychiatric hospitalisation [2]	12,946	329.0	sr	303.0
	26 Deaths from suicide [1]	1,105	18.1	sr	15.1
Social Care & Housing	27 People (65+) receiving free personal care at home [3]	11,643	6.3	%	5.3
	28 Adults claiming incapacity benefit/severe disability allowance	72,440	7.3	%	5.6
	29 People (65+) with intensive care needs cared for at home [3]	4,799	36.5	%	31.7
	30 Households assessed as homeless [3]	n/a		%	1.8
	31 Children looked after by local authority [3]	4,980	21	cr2	14
	32 Single adult dwellings	248,248	42.7	%	37.8
	33 Households in extreme fuel poverty [3]	n/a		%	7.5
Education	34 Average tariff score of all pupils on the S4 roll	n/a	178.4	mean	179.7
	35 Primary school attendance	n/a	94.6	%	95.2
	36 Secondary school attendance	n/a	90.8	%	91.1
	37 Working age adults with low or no educational qualifications [3]	n/a		%	14.8
Economy	38 Population income deprived	241,875	20.3	%	15.1
	39 Working age population employment deprived	113,570	14.8	%	11.6
	40 Working age population claiming Jobseeker's Allowance	41,495	5.4	%	4.4
	41 Dependence on out of work benefits or child tax credit	141,435	52.2	%	46.6
	42 People claiming pension credits (aged 60+)	38,410	15.3	%	11.0
Crime	43 Crime rate	70,306	59.0	cr2	49.5
	44 Prisoner population	2,455	289.9	sr	205.5
	45 Referrals to Children's Reporter for violence-related offences	1,029	9.9	cr2	8.4
	46 Patients hospitalised after an assault [2]	4,836	133.6	sr	95.2
Environment	47 Population within 500 metres of derelict site	560,525	46.8	%	30.0
	48 People living in 15% most 'access deprived' areas	38,992	3.3	%	14.2
	49 Adults rating neighbourhood as a very good place to live [3]	n/a	45.0	%	52.0
Women's & Children's Health	50 Breast screening uptake [2]	91,517	71.4	%	75.3
	51 Mothers smoking during pregnancy [2]	6,673	23.9	%	22.6
	52 Teenage pregnancies [2]	2,733	41.7	cr2	41.4
	53 Low weight live births [2]	1,017	2.8	%	2.3
	54 Babies exclusively breastfed at 6-8 weeks [2]	8,928	23.7	%	26.4
	55 Immunisation uptake at 24 months - MMR [2]	35,586	91.8	%	92.1
	56 Immunisation uptake at 24 months - all excluding MMR [2]	37,698	97.3	%	97.5
	57 Child dental health in primary 1	6,114	56.4	%	61.8
	58 Child obesity in primary 1	n/a		%	8.0
	59 Patients hospitalised by unintentional injuries at home (<15) [2]	2,320	411.1	sr	377.5

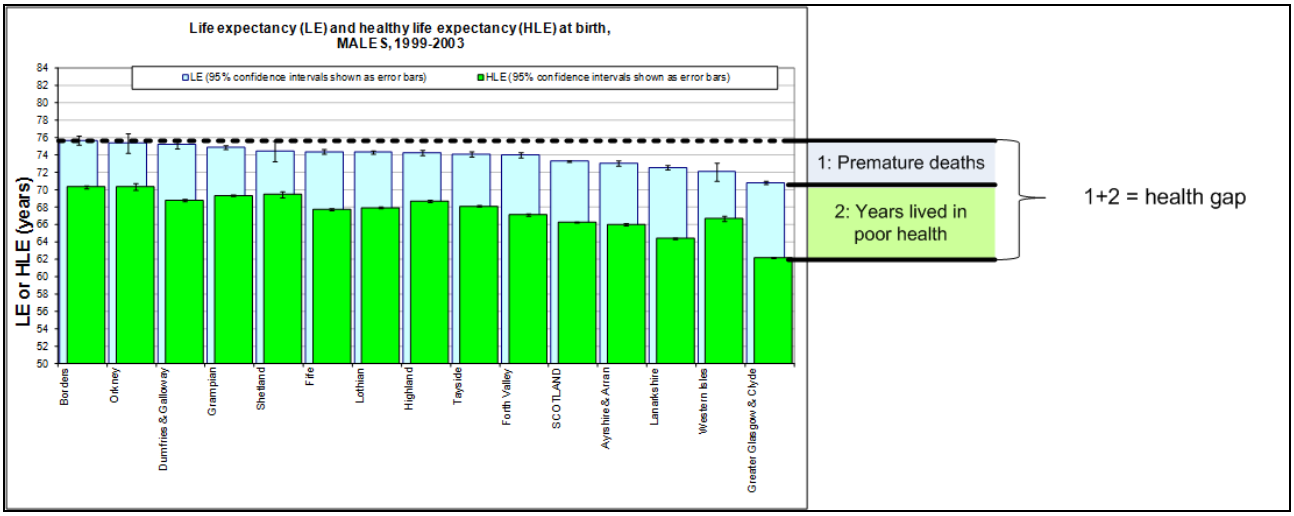


Notes:
1. Five-year combined number, and 5-year average annual measure.
2. Three-year combined number, and 3-year average annual measure.
3. Data available down to local authority level only.

Key:
n/a= data not available, or cannot be calculated; cr = crude rate per 100,000 population; cr2 = crude rate per 1,000 population;
sr = age-sex standardised rate per 100,000 population; sr2 = age-sex standardised rate per 100 population yrs = years; % = percent; mean = average.
See the detailed Definitions and Sources table for indicator information and Technical Report (on the web) for further guidance on interpreting the spine.

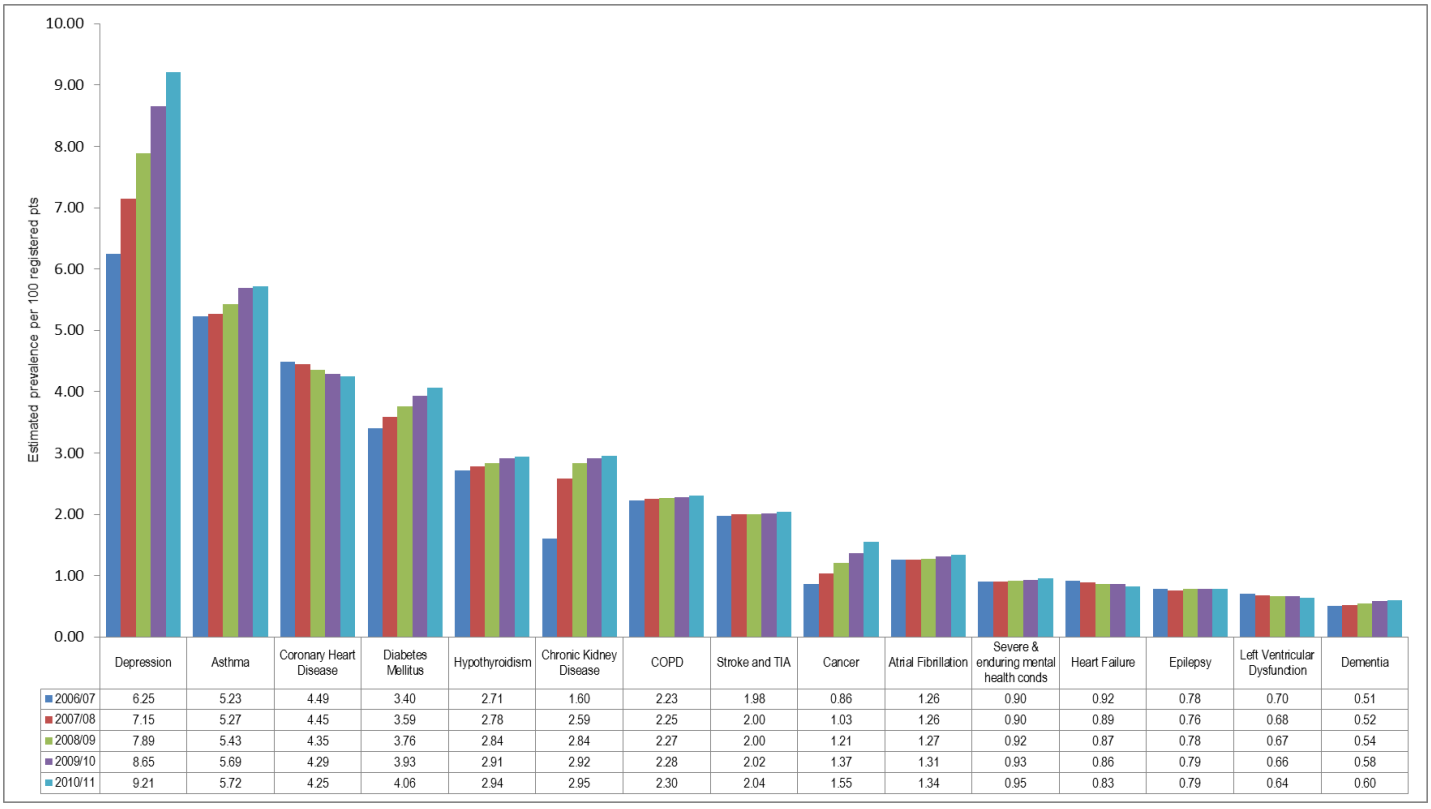
Average life expectancy in NHSGGC, although rising, is the lowest in Scotland and among the lowest in Europe. Male life expectancy at birth among NHSGGC residents is 70.8 years. Deaths are considered to be premature when they occur before the usual age of death; in Scotland, this is defined as 75. Not only do NHSGGC residents have, on average, shorter lives compared with other Scottish residents, but they also spend more years in ill health. Male healthy life expectancy at birth is 62.2 years. Figure 2 shows the size of the gap in both life expectancy and healthy life expectancy between NHSGGC and other Scottish Health Boards.

Figure 2: Male life expectancy and healthy life expectancy in Scotland, showing GGC health gap



Chronic disease accounts for around two thirds of this health gap and the prevalence of diagnosed chronic conditions in primary care within NHSGGC is rising (Figure 3).

Figure 3: Estimated chronic disease prevalence in NHSGGC (Source: QOF)



	Depression	Asthma	Coronary Heart Disease	Diabetes Mellitus	Hypothyroidism	Chronic Kidney Disease	COPD	Stroke and TIA	Cancer	Atrial Fibrillation	Severe & enduring mental health conds	Heart Failure	Epilepsy	Left Ventricular Dysfunction	Dementia
2006/07	6.25	5.23	4.49	3.40	2.71	1.60	2.23	1.98	0.86	1.26	0.90	0.92	0.78	0.70	0.51
2007/08	7.15	5.27	4.45	3.59	2.78	2.59	2.25	2.00	1.03	1.26	0.90	0.89	0.76	0.68	0.52
2008/09	7.89	5.43	4.35	3.76	2.84	2.84	2.27	2.00	1.21	1.27	0.92	0.87	0.78	0.67	0.54
2009/10	8.65	5.69	4.29	3.93	2.91	2.92	2.28	2.02	1.37	1.31	0.93	0.86	0.79	0.66	0.58
2010/11	9.21	5.72	4.25	4.06	2.94	2.95	2.30	2.04	1.55	1.34	0.95	0.83	0.79	0.64	0.60

At a population level In NHSGGC, an estimated 436,000 adults (43% of the population) live with a long term condition (LTC); in around half, this condition limits their day to day activities.[3,4] Local surveys suggest little overall change in this situation since 2002.[5]

Chronic diseases are the leading cause of mortality and morbidity in NHSGGC and all indications suggest that depression, diabetes and chronic kidney disease and will impose an even larger burden in the future. Chronic diseases were previously considered to be a consequence of ageing, but it is clear that lifestyle and behavioural risk factors are becoming a major contributor to NHSGGC's burden of chronic disease, particularly where they cluster together (Table 2).[6]

Table 2: Individual & joint contributions of top 20 risk factors in industrial countries.[6]

Disease	Estimated % UK disease burden	Contributing risk factors (individual PAF for each risk factor)	Combined PAF for all preventable risk factors
Ischaemic heart disease	9.4%	High blood pressure (58%); high cholesterol (63%); high BMI (33%); low fruit and vegetable intake (28%); physical inactivity (22%); tobacco (22%); alcohol (0.2%)	89-93%
Unipolar depressive disorders	7.2%	Alcohol (3%); childhood sexual abuse (4%)	7%
Stroke	6.0%	High blood pressure (72%); high cholesterol (27%); high BMI (23%); low fruit and vegetable intake (12%); physical inactivity (9%); tobacco (22%); alcohol (0%)	81-86%
Alcohol use disorders	3.5%	Alcohol (100%); childhood sexual abuse (3%)	100%
Alzheimer and other dementias	3.0%	None of the selected risks	0%
Hearing loss	2.8%	Tobacco (10%)	10%
Chronic obstructive pulmonary disease	2.6%	Indoor smoke from solid fuels (2%); tobacco (69%)	71%
Road traffic accidents	2.5%	Alcohol (38%); illicit drugs (4%); occupational risk factors for injuries (4%)	45%
Osteoarthritis	2.5%	High BMI (21%); Tobacco (10%)	28%
Trachea, bronchus and lung cancers	2.4%	Indoor smoke from solid fuels (coal only) (0%); tobacco (85%); low fruit and vegetable intake (11%)	86%
Communicable, maternal, perinatal and nutritional conditions	9.0%	Multiple risks	24-25%
Non-communicable diseases	78.2%	Multiple risks	41-42%
Injuries	12.8%	Multiple risks	36%
All causes	100%	All 20 selected risk factors	39-40%

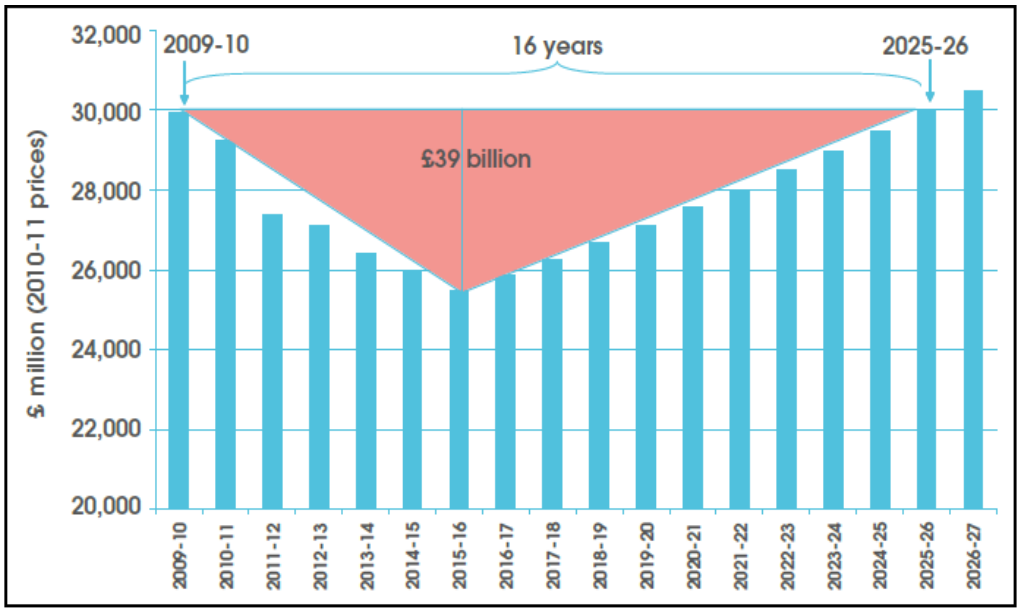
Multiple morbidity has recently been highlighted as a key issue; a recent cross-sectional study of 1,751,841 patients across 314 Scottish practices indicated that 42% of all patients had at least one chronic morbidity, of whom 55% had multimorbidity.[7] The onset of multimorbidity was found to occur typically 10–15 years earlier among people living in Scotland's most socio-economically deprived areas, compared with the most affluent, with co-existent physical and mental health disorders identified as a particularly critical issue for those living with deprivation.

Finally, although the majority of individuals with long term conditions never require hospital admission, they are an important contributor to hospital admissions; ISD Scotland estimated that they accounted for 7% of total hospital admission episodes and 11% of emergency bed days in NHSGGC during 2011/12. (http://www.isdscotland.org/Health-Topics/Hospital-Care/Diagnoses/). It is clear that a relatively small subset of patients with LTCs generates a high number of multiple admissions and bed days. As a subset of all admissions for LTCs, COPD is the leading cause by far in NHSGGC.

1.4 Current context: fiscal

The long years of increasing financial spending are over for the NHS. The financial and economic crisis that began in 2007 is now placing increasing pressure on all public services and the most favourable estimates suggest that it will take until 2025/26 for the Scottish budget to return to its 2009/10 levels in real terms, an adjustment period of 16 years (Figure 8).[8] NHSGGC therefore faces unprecedented financial constraints; whilst extremely challenging, this also presents real opportunities to redesign clinical strategies to ensure that they focus on the right priorities and deliver the most effective interventions with maximum efficiency.

Figure 4: Outlook for Scottish Public Expenditure to 2027[8]



2. Purpose and scope of review

2.1 Aim

To review NHSGGC's current primary care based CDM programme in the wider context of population needs, considering the extent to which this investment achieves three main objectives:

a. promotion and improvement of population health
b. reduction of health inequalities and improved equity of health status
c. maximum value and quality of healthcare

2.2 Underpinning principles

Given the fiscal and epidemiological challenges highlighted in Section 1, the importance of explicit prioritisation methods for health service planning is greater than ever. Setting priorities should be based on the costs and benefits of health services, recognising that all new activity requires reallocation of resources from other areas of care and consideration of the healthcare system as a whole, rather than a portfolio of isolated healthcare interventions. For the purposes of this review, the following four criteria have been used as a starting point for appraisal of existing Enhanced Services and any change recommendations.

a. Explicit prioritisation of conditions that make the biggest contribution to our total burden of disease
b. Equity of access and uptake based on health need should be designed into all Enhanced Services
c. All interventions should have strong evidence of clinical and cost effectiveness
d. The programme should enhance integration and synergy of the healthcare system, incorporating primary, secondary and tertiary prevention

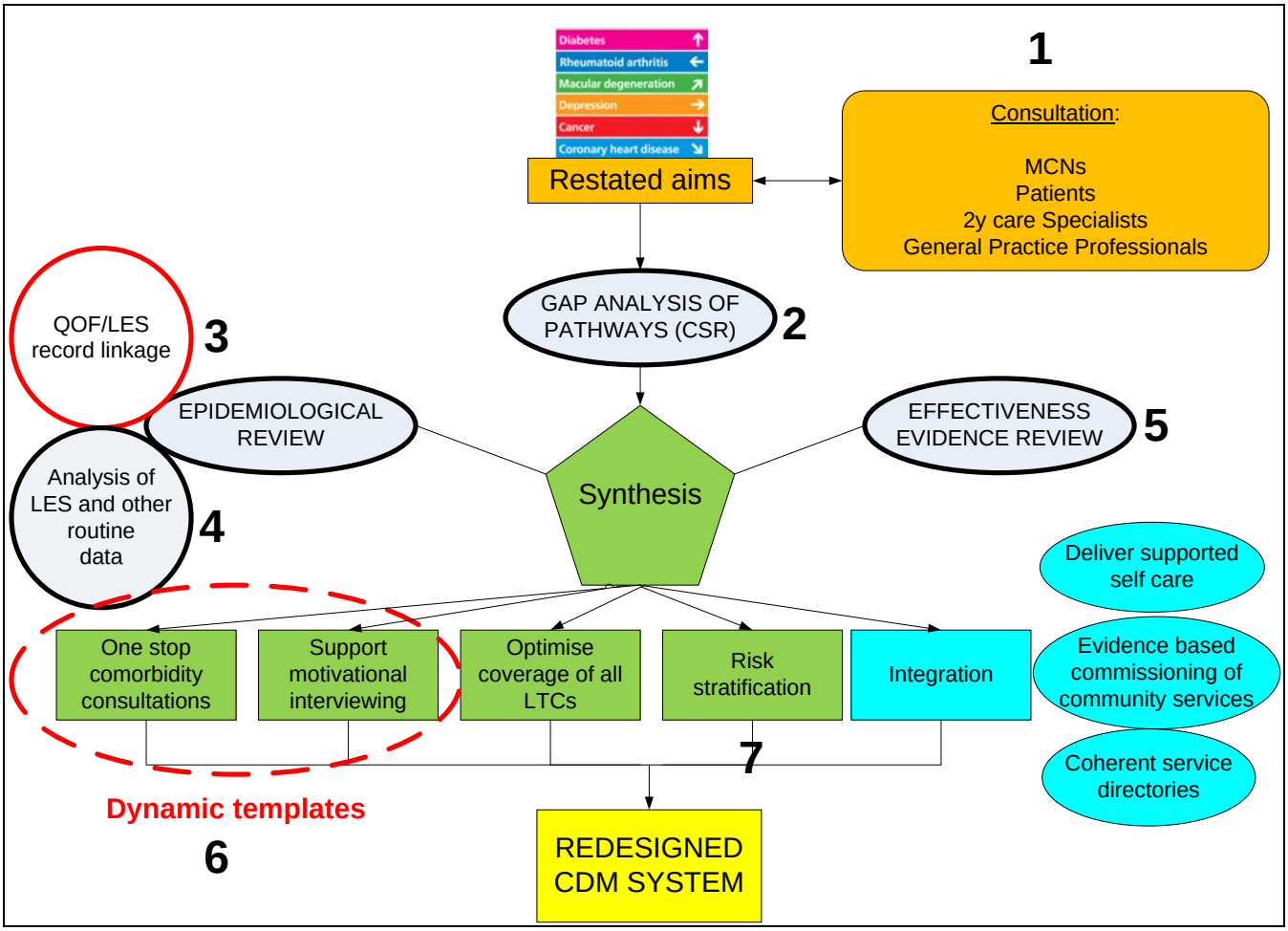
2.3 Scope

The review is focused on the CDM programme currently commissioned via the LES contracting mechanism. It does not extend to other LES interventions beyond the CDM programme. It is also recognised that a wide range of other acute and primary care based services are required to be in place to support the programme itself; although these are identified, they are not addressed in detail within this paper.

3.0 Components of review

The approach to reviewing the primary care based CDM programme had seven main components, summarised in the conceptual map below and briefly described in the following section.

Figure 5: Overview of methodology



3.1 Stakeholder consultation: During the summer of 2012, consultation with clinical leads in each of the MCNs, patients and GPs involved in the LES programme was undertaken, to redefine and update strategic aims for the CDM programme.

3.2 Gap analysis: During November/December 2012, the CDM subgroup of the CSR undertook process mapping on key condition-specific pathways for LTCs. Selection of pathways for review was based on two criteria; i) Overall quantitative contribution to chronic disease burden; and ii) Fit with agreed remit of CDM subgroup of CSR. The candidate and final sets of pathways reviewed are shown overleaf in Table 3. This analysis allowed a wide range of clinical stakeholders to:

- Review the local epidemiology of LTCs & need for services
- Define 'gold standard' evidence-based, condition-specific pathways for their specialty
- Synthesise the many cross cutting issues which were emerging from the 'case for change'
- Consider opportunities for integration across multiple conditions
- Ensure fit of emerging pathways with the evidence review

Table 3: CDM Pathways identified & reviewed in gap analysis work by MCNs

Specialty	Condition-specific pathway	Allocated reviewers
Cardiology	Acute coronary syndrome	Heart MCN
	Heart failure	
	Acute arrhythmias	
	Hypertension	
Respiratory	Asthma	Respiratory MCN
	COPD	
Audiology	Adult hearing loss	To be considered elsewhere in CSR review process
Addictions services	Drug use and addiction	To be considered elsewhere in CSR review process
Rheumatology	Osteoarthritis	Rheumatology MCN
	Rheumatoid arthritis	
Diabetology	Type 1 Diabetes	Diabetes MCN
	Type 2 Diabetes	
Neurology	Parkinsons disease and other movement disorders	To be considered elsewhere in CSR review process
	Multiple sclerosis	
	Epilepsy	
	Headache	
Gastroenterology	Inflammatory bowel disease	To be considered elsewhere in CSR review process

3.3: Epidemiological needs assessment: In early 2013, a proposal was developed for an epidemiological analysis to quantify the extent to which the current CDM programme provides coverage for patients with other long term conditions, where there is evidence that a structured disease management programme would generate additional health benefits. The necessary data for the needs assessment require extraction of individual patient level QOF codes (rather than aggregated practice level QOF prevalence information). This allows analysis of the size, characteristics and distribution of the population currently not covered by the CDM LES programme. Prolonged negotiations with the Glasgow LMC took place during 2013, which were successfully concluded in September 2013, subject to the agreement of individual general practices. A technical specification for the data extraction was developed and all practices were contacted to seek their agreement to extraction and record linkage of selected QOF Read codes. Two practices objected to extraction of codes, one of whom had formally sought medicolegal advice; this requested that individual patient consent should be sought to extraction and subsequent anonymised record linkage of QOF codes.

The public health assessment of the proposed data extraction process is that it fully meets all information governance principles without the requirement for individual patient consent. However, given the range of medicolegal issues raised by the practice, NHSGGC's Head of Information Governance has sought clarification from Scotland's Information Commissioner that the proposed extraction meets all necessary legal requirements. If this opinion is favourable, Read code extraction can proceed immediately.

3.4: Analysis of existing LES CDM programme clinical data: In early 2012, the technical deficiencies of the extraction system previously used for the LES clinical surveillance became apparent. A new system was commissioned during 2012/13, which retrospectively captured the entire denominator of all patients in the disease registers (including those who had subsequently died or transferred outwith NHSGGC). Clinical data extraction became operational in July 2013. Following testing and cleaning, a substantial backlog of data is now being analysed.

3.5: Review of effectiveness evidence: A search of existing published evidence on models of CDM healthcare relevant to the NHSGGC context was undertaken. Two separate literature searches were conducted, the first in December 2011 and the second, with a wider scope, in September 2012. The search strategies for both are available on request.

Inclusion criteria: Studies were included if they:

- Describe systems and approaches to the delivery of health services
- Evaluate the effectiveness and/or cost-effectiveness of service models
- Evaluate patient level outcomes across different types of service models
- Compare health or social care utilisation across different types of service models
- Include either publicly or joint funded initiatives
- Delivery settings are located in developed or industrialised regions
- Delivery settings are in acute or community care

Exclusion Criteria: Material excluded and not referred for further review if:

- study solely addressed clinical interventions delivered and evaluated at an individual patient level
- findings not transferable to NHSGGC context

Duplicates were discarded and the remaining abstracts or executive summaries (where available) were reviewed for their relevance to the review criteria.

Minimising bias: this was designed into the methodology at three stages in the process:

- During selection process: Two reviewers independently assessed each article against the above inclusion and exclusion criteria and discussed any areas of discrepancy to resolve these.

- In appraisal process: two reviewers independently assessed each article against validated quality criteria for that type of publication, using a pre-designed matrix to ensure consistency in data extraction.

- In synthesis process: the findings of the review were presented in tabular format and discussed in the context of existing research evidence on that particular topic area.

3.6: Review of electronic decision support templates: Clinical decision support is a vital component of all high performing CDM systems. Over the past four contract years, incremental changes have been made to the LES clinical templates, with the aim of supporting more patient-centred approaches and making the templates as clear, simple, evidence-based and user-friendly as possible. However, current evidence continues to indicate substantial variation, both in clinical consultation processes and in workforce competencies required for delivery of the CDM LES programme. Accordingly, a more fundamental 'root and branch' review of both the templates and their associated competency requirements was initiated in July 2013, with the following aims:

- To ensure that the content of our current Keep Well and CDM consultation templates fits the underlying strategic aims of each Local Enhanced Service and is fully aligned with current clinical evidence and behavioural change theory

- To clearly define the workforce development and training needs to enable high quality LES programme delivery

- To increase the consistency, clarity & appropriateness of electronic templates across all disease areas & ensure that they are aligned with best practice in clinical decision support

- To strengthen the existing template change control process

3.7: Risk stratification: Risk stratification approaches have become widely used to support the efficient management of health systems since the 1980s; they are intended to build a risk profile of the registered population and to enable targeting of interventions towards those at greatest risk. Clinical prediction rules are also used in everyday clinical decisionmaking, eg use of predictive modelling tools such as SPARRA in 'case finding' patients at increased risk of hospital readmission.

Work in partnership with the Diabetes, Stroke and Heart MCNs and with GP colleagues was undertaken in early 2011, to define high priority patient groups at highest risk in the existing vascular & metabolic programme.

3.8: Other components required to support CDM LES: Although not part of the commissioned LES itself, three additional components require to be in place for effective delivery of a CDM system:

a. Appropriate supported self care infrastructure
b. Accessible, clinically effective community services
c. Functioning service directories

As the scope of the review did not cover these complementary components, current work in this area was identified and briefly summarised.

4. Review findings

4.1 Stakeholder consultation

Stakeholders called for an extended the range and coverage of the existing LES programme and more patient-centred consultations that address the needs of patients with multimorbidity.

4.2 Gap analysis

A summary of the findings of the pathway gap analysis is provided below. The full report is attached in Appendix 1.

Audit of existing clinical pathways against 'gold standard' care as defined by each MCN in their own clinical area showed that there have been many innovative models of care in NHSGGC, however these were generally working just in one or two specialties or organisaitonal locations. There is enormous potential for greater connectivity translating models of care across the CDM system to create a more unified generic CDM programme approach. In particular, there is unmet need for:

- Strengthening education about preventability of LTCs in new & imaginative ways, for patients, potential patients, carers and professionals.

- A more critical approach to introduction of screening (including risk stratification) in CDM which has the potential to further increase demand with negligible health gain, as shown for Keep Well health checks, mental health screening and COPD screening. Thus, screening should be introduced only when the criteria for establishing a screening programme are met

- More effective individualised anticipatory care planning

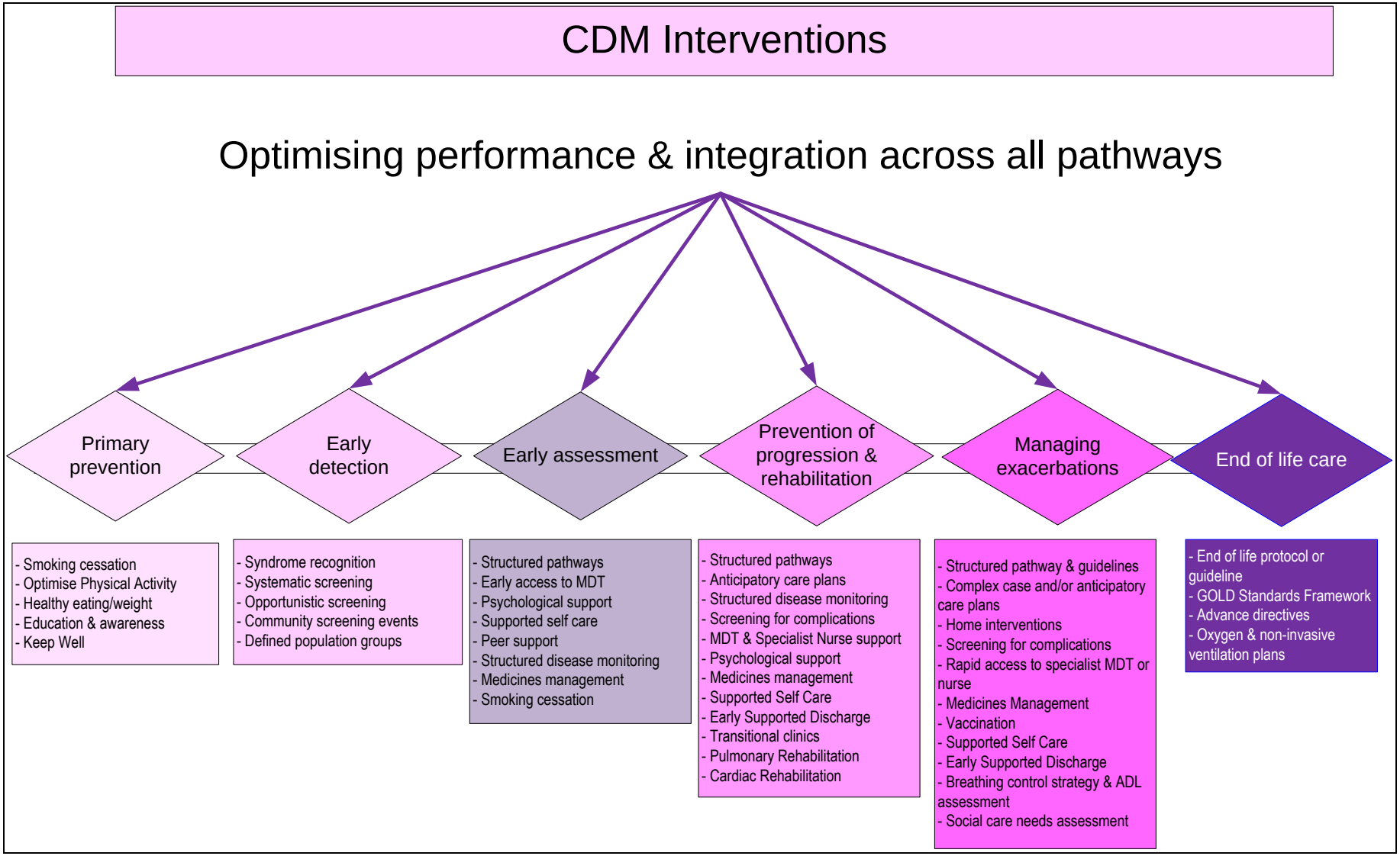
- Accessible and effective follow up support interventions as part of a single CDM system

- Upskilling of all staff to support patients' psychological needs and to deliver brief interventions. This was a clear gap across all CDM pathways; there were also unresolved questions about how best to use scarce specialist psychology resources; potential solutions included a generic multidisciplinary LTC team, easily accessible as the first point of contact, functioning as a generic gateway to scarcer specialist psychological expertise

- More systematic approaches to end of life care across the entire local healthcare system.

More generally, areas requiring clearer definition and consistent implementation are the professional group/s best placed to deliver different types of CDM and the most appropriate location for delivery Five key intervention points were identified where models of care performance (Figure 7).

Figure 7: Recommendations for addressing gaps across anticipatory care pathways



4.3 Epidemiological needs assessment

Once the data required for the epidemiological needs assessment are available and the analysis is complete, a process of prioritisation will be undertaken in conjunction with MCNs to identify the size and characteristics of population subgroups who would benefit from structured disease management approaches based on a population based register. The type and frequency of interventions will require careful definition and there will be no *a priori* assumptions about the location or professional group/s best placed to deliver these. The candidate conditions are:

- Asthma
- Atrial fibrillation
- Chronic kidney disease
- Chronic pain
- Dementia
- Depression
- Epilepsy
- Severe & enduring mental health problems (i.e. schizophrenia, bipolar disorders & other psychoses)
- Rheumatoid arthritis
- Peripheral arterial disease

4.4 Analysis of existing LES CDM programme clinical data

LES programmes for all five chronic diseases have now been established across the entire Board area since April 2012 and almost all practices in NHSGGC. Following replacement of the clinical data extraction system in 2013, it has only recently become possible to analyse clinical data; detailed analyses have been completed for LVSD (heart failure) and a separate report will be available for all five conditions in early January 2014. Selected data on the CDM cohort in 2012/13 are provided below.

Patient characteristics

Type 2 diabetes accounts for around one third of the total of 168,075 diagnoses. There are clear gender-dependent patterns of premature disease, with a higher proportion of men under the age of 65 diagnosed with Type 2 diabetes, CHD and COPD (Table 5). In contrast, the distribution of all five diseases in women increases with age. These features are likely to reflect wider premature mortality patterns in men which are closely linked to socioeconomic deprivation.

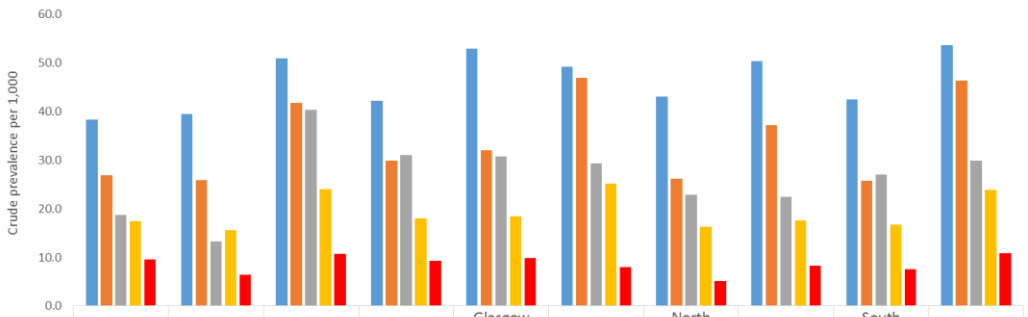
Table 5: Characteristics of patients with chronic disease in LES programmes, 2012/13

	Male			Female			TOTAL
	<65	65-74	75+	<65	65-74	75+	
Type 2 Diabetes	16,495	8,497	6,308	11,201	6,889	7,916	**57,306**
CHD	8,474	7,153	7,721	4,562	4,912	9,015	**41,837**
COPD	5,594	5,015	4,319	7,067	5,909	6,308	**34,212**
Stroke	3,968	3,466	4,439	3,146	2,829	5,770	**23,618**
LVSD	1,985	2,100	2,760	775	976	2,506	**11,102**
All diagnoses	**36,516**	**26,231**	**25,547**	**26,751**	**21,515**	**31,515**	**168,075**

Crude prevalence

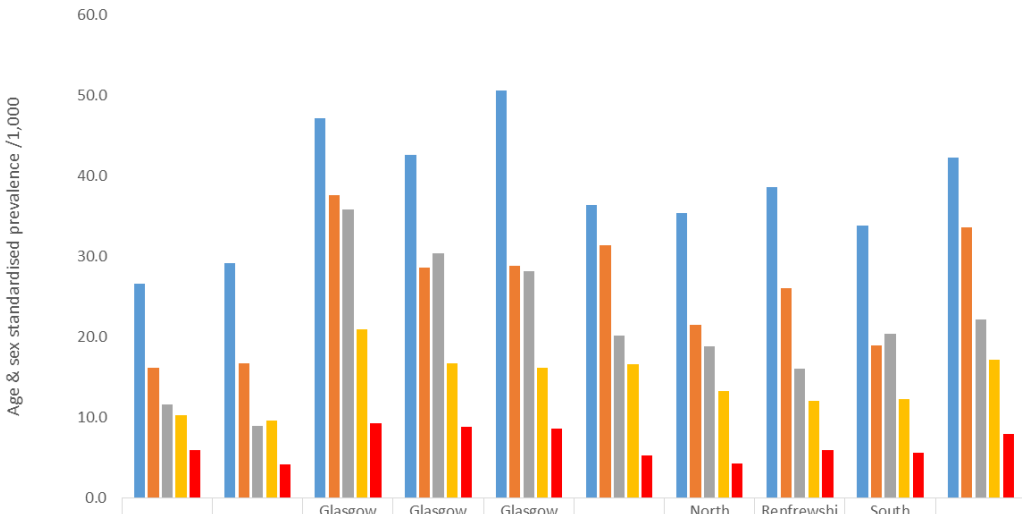
The virtual completeness of the LES chronic disease registers allows some estimation of the prevalence of these diseases at community level. Caution should be used in interpreting population prevalence data in areas where there is only partial coverage of the NHSGGC part of the local resident population by the LES. This applies in North and South Lanarkshire. There are substantial variations in prevalence of all five conditions across the Health Board area, which becomes even more marked after adjusting for age and sex differences across the population. (Figures 8 and 9).

Figure 8: Crude prevalence of diagnosed Type 2 Diabetes, CHD, COPD, Stroke/TIA and LVSD in NHSGGC, 2012/13



	East Dun	East Ren	Glasgow NE	Glasgow NW	Glasgow South	Inverclyde	North Lanarks	Renfrewshire	South Lanarks	West Dun
Diabetes	38.2	39.4	50.8	42.1	52.9	49.2	43.0	50.2	42.4	53.6
CHD	26.8	25.9	41.7	29.8	32.1	46.8	26.2	37.2	25.7	46.3
COPD	18.7	13.3	40.3	31.0	30.8	29.3	22.9	22.5	27.0	29.9
Stroke	17.4	15.5	24.1	18.0	18.5	25.2	16.3	17.6	16.8	23.8
Heart Failure	9.6	6.4	10.6	9.3	9.9	8.0	5.1	8.3	7.6	10.9

Figure 9: Directly standardised rates of diagnosed Type 2 Diabetes, CHD, COPD, Stroke/TIA and LVSD in NHSGGC, 2012/13



	East Dun	East Ren	Glasgow North East	Glasgow North West	Glasgow South	Inverclyde	North Lanarks	Renfrewshire	South Lanarks	West Dun
Diabetes	26.6	29.1	47.1	42.6	50.5	36.3	35.4	38.6	33.9	42.3
CHD	16.2	16.7	37.5	28.6	28.8	31.4	21.5	26.0	19.0	33.6
COPD	11.6	9.0	35.9	30.4	28.1	20.2	18.8	16.0	20.4	22.2
Stroke	10.3	9.6	21.0	16.8	16.1	16.7	13.3	12.1	12.2	17.1
Heart Failure	5.9	4.2	9.2	8.8	8.6	5.3	4.3	5.9	5.6	7.9

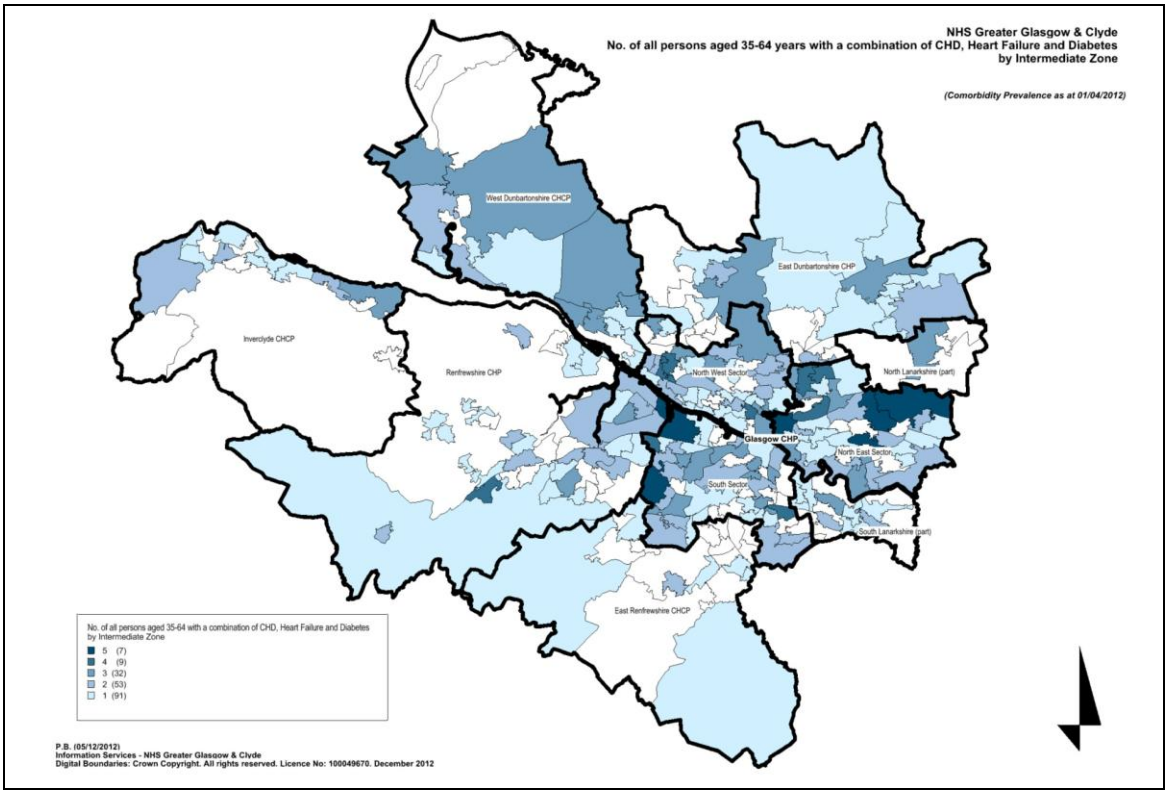
Table 5: Patterns of comorbidity in chronic disease LES programmes, 2012/13

No. of Diseases	Has CHD	Has COPD	Has Diabetes	Has Heart Failure	Has Stroke	No. of Patients
5	■	■	■	■	■	70
4		■	■	■	■	20
4	■		■	■	■	285
4	■	■		■	■	139
4	■	■	■		■	177
4	■	■	■	■		274
3			■	■	■	127
3		■		■	■	60
3		■	■		■	369
3		■	■	■		102
3	■			■	■	527
3	■		■		■	930
3	■		■	■		1,389
3	■	■			■	548
3	■	■		■		753
3	■	■	■			827
2				■	■	299
2			■		■	3,056
2			■	■		687
2		■			■	1,802
2		■		■		436
2		■	■			2,759
2	■				■	2,291
2	■			■		3,461
2	■		■			5,880
2	■	■				3,521
1					■	13,643
1				■		2,642
1			■			40,972
1		■				22,993
1	■					21,410
Total No. of Patients						**132,449**

As shown in Table 5 above, patients with 'multimorbidity' in the current CDM programme were in the minority, representing 23% of the current cohort (Table 5). This contrasts with the findings of the research study by Barnett et al in Scottish general practices, in which 55% of patients with chronic disease had multimorbidity; this is likely to be explained by the stricter definition of 'morbidity' in the LES analysis, which excluded conditions such as anxiety, depression, pain and hypertension as diagnoses, whereas the definition for the LES review was another clinical condition covered by the five LES CDM programmes.

Premature multimorbidity (defined as two or more of the five chronic conditions covered by the NHSGGC LES programme in patients under the age of 65) showed marked spatial concentration in NHSGGC's most deprived neighbourhoods, as exemplified by the combination of CHD, Type 2 Diabetes and LVSD (Figure 10 overleaf).

Figure 10: Spatial distribution of patients with co-existent CHD, LVSD and Diabetes: LES Programme 2012/13



Access relative to need

Rates of exception coding are a measure of access relative to need; this ranged from 2-9% across different CHP areas (Table 6).

Table 6: Exception coding in patients with LVSD*, by reason: 2012/13

(*Excludes patients in nursing home practice and 1 patient with unknown CHP)

	13CA. (Housebound)	13F61. (lives in a nursing home)	13F81. (long stay hospital inpatient)	9hH0 (Patient Unsuitable)	9hH1 (Informed disent)	94NJ (Did not attend)	Total (not a sum)	TOTAL ON LVSD REGISTER, BY CHP	% Exception coded
East Dun	17	2	0	14	49	1	74	1,006	7.4%
S Lanarks	21	1	0	1	0	1	22	446	4.9%
Glasgow South	60	3	1	35	12	3	98	2,197	4.5%
Inverclyde	11	2	1	8	6	0	26	636	4.1%
Glasgow NW	37	7	1	15	19	0	69	1,833	3.8%
Glasgow NE	28	7	0	21	6	16	68	1,911	3.6%
Renfrewshire	23	7	0	8	16	2	50	1,420	3.5%
N Lanarks	2	0	0	1	0	0	3	102	2.9%
West Dun	19	3	0	2	3	0	27	986	2.7%
East Ren	9	0	0	4	0	0	12	565	2.1%
TOTAL	**109**	**8**	**2**	**58**	**67**	**5**	**220**	**11,102**	**2.0%**

Unfortunately the current LES templates do not request practices to Read code patients who have had a completed annual review. Achievement thresholds are currently used as a proxy for 'completed annual review' at an individual patient level; however, more detailed scrutiny of the clinical data suggest that this may not now be a valid proxy.

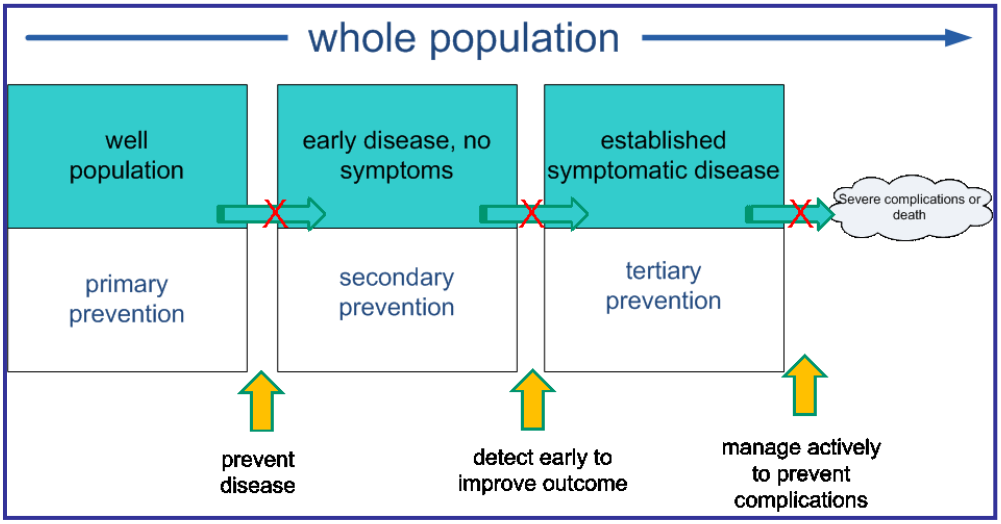
Detailed analysis of all clinical indicators will be provided in a separate report in January 2014. For LVSD, indications are that only 40% of patients with LVSD have a recorded NYHA class and there is also extensive evidence of drug prescribing patterns which do not accord with current guidelines.

4.5 Review of effectiveness evidence (Also see Appendix 2)

4.5.1 Strategic goals of CDM systems

The natural history of chronic disease, without intervention, is one of a continuum from a disease-free state, to asymptomatic biological change to clinical illness, impairment and disability, development of complications, and, for some conditions, ultimately death. At each point of the continuum of care, the objective is to control the condition and to prevent or delay progression to more severe forms of disease or complications. Each stage of intervention in this process has a preventive component, requiring not only best practice clinical management, but the active contribution of the patient to their own care. Healthy behaviours play a key role, not only in preventing chronic disease, but also in its ongoing management. The principles, approaches and messages of health promotion (eg empowerment, health literacy, supportive environments, recognising the links between mental and physical health are relevant across the spectrum of care, not only at the primary prevention end of the continuum (Figure 11).

Figure 11: Strategic goals for reducing health impact of chronic disease



Chronic disease management (CDM) is a generic term for systematic delivery of coordinated healthcare for populations with established LTCs. Its overall aim CDM is to transform care for patients with chronic illnesses from acute and reactive to proactive, planned and population-based. CDM has the following key features (Box 1):

Box 1: Key features of Chronic Disease Management

- Population orientation (ie defined by a condition, not a service)
- Comprehensive, multidisciplinary care
- Integrated care continuum across entire disease cycle
- Effective systems for coordination
- Active client–patient management tools (health education, empowerment, self-care)
- Structured, evidence-based approach
- Use of guidelines, protocols and care pathways
- Deployment of information technology and system solutions
- Continuous audit and quality improvement

4.5.2 Clinical evidence to support CDM commissioning

Evidence to inform CDM commissioning can be considered on two levels; i) evidence supporting specific biomedical components of CDM programmes (eg statin therapy in patients with CHD for prevention of future cardiovascular events, etc); and ii) evidence supporting CDM delivery approaches and models (Table 6).

Table 6: Evidence summary for CDM

Evidence domain	Disease				
	CHD	**Stroke**	**Heart Failure**	**Diabetes**	**COPD**
Biomedical	Aspirin reduces risk of further CVD events and CVD death (NNT*=12)[9-11] Beta-blockers reduce risk of death (NNT*=20) [9-11] Angiotensin-converting enzyme inhibitors (ACEI) reduce risk of death (NNT*=50); recurrent MI (NNT*=42); and stroke (NNT*=67) [9-11] Lipid-lowering therapies lower the risk of death and non-fatal MI (NNT* =12) [9-11] When these interventions are used together with smoking cessation, about three quarters of recurrent vascular events prevented[12,13]	BP control, lipid lowering therapy & antithrombotics reduce risk of recurrent stroke, dependent on the type of stroke; average effect size is around 22%.[14,15] BP control, lipid lowering therapy & antithrombotics also associated with a 'real world' 50% reduction in mortality risk (adjusted hazard ratio 0.50, 95% CI 0.42 to 59).[14,15] A systematic review of 14 trials of rehabilitation significantly reduces the odds of deteriorating in personal activities of daily living (odds ratio 0.72 [95% CI 0.57 to 0.92], p=0.009)[16]	ACEIs associated with lower rates of death (23.0% vs 26.8%; odds ratio 0.80; 95% CI 0.74–0.87; NNT 26; p<0.001) and readmission for heart failure (13.7% vs 18.9%; odds ratio 0.67; 95% CI 0.61–0.74; NNT 19; p<0.001).[17] Beta blockers reduce risk of mortality from cardiovascular causes by 29% (95% CI 14% to 42%); reduce mortality due to pump failure by 36% (95% CI 9% to 55%); and reduce all cause mortality by 23% (95% CI 8% to 35%).[18] Structured interventions by a dedicated professional (eg nurse) are more effective than usual care in improving self-management and adherence.[19]	Glycaemic control in people with HbA1c > 9%: 30% reduction in microvascular disease per 1% drop in HbA1c[20] BP control (BP>130/80mmHg): 35% reduction of macrovascular and microvascular disease per 10 mmHg drop in BP[20] Biannual eye examinations: 60-70% reduction in serious vision loss[20] Foot care in people with high risk of ulcers: 50 to 60% reduction in serious foot disease[20] ACEI use: 42% reduction in nephropathy; 22% reduction in CVD[20]	See NICE Review:[21] • Diagnose COPD • Smoking cessation • Promote effective inhaled therapy • Provide pulmonary rehabilitation • Manage exacerbations
Delivery model	Secondary preventive programmes for CHD that include risk factor education or counselling are associated with a significantly reduced risk of mortality (risk ratio, 0.87 (CI 0.76 to 0.99)).[10]				

	Secondary preventive programmes that include risk factor education, counselling and structured exercise associated with a significantly reduced risk of subsequent acute myocardial infarction (0.62 (CI 0.44 to 0.87)).[10] Programmes that are purely exercise-based were associated with a significantly reduced risk of mortality (risk ratio, 0.72 (CI, 0.54 to 0.95)).[10] Established cognitive behavioural strategies, (eg motivational interviewing) have a clinically detectable effect on risk markers and risk factors for disease progression[12,13] A 2005 meta-analysis of 72 RCTs in primary care settings showed a significant effect of motivational interviewing on body mass index, total blood cholesterol, systolic blood pressure, blood alcohol concentration, but no significant effect on number of cigarettes smoked per day or for HbA1c:[13] • Body mass index 0.72 p=0.0001 (95% ci 0.33 to 1.11) • Total blood cholesterol (mmol/l) 0.27 p=0.0001 (95% ci 0.20 to 0.34) • Systolic blood pressure (mmHg) 4.22 p=0.038 (95% ci 0.23 to 8.99) • Blood alcohol content (mg%) 72.92 p=0.0001 (95% ci 46.80 to 99.04) • Number of cigarettes/day 1.32 p=0.099 (95% ci -0.25 to 2.88) • HbA1c (%GHb) 0.43 p=0.155 (95% ci -0.16 to 1.01) [13]

The original evidence underpinning CDM came from a review of interventions to improve care for various chronically ill populations.[22] These evaluations showed (confirmed by a subsequent Cochrane Collaboration review) that delivery of a number of elements working synergistically together strengthen the provider/patient relationship and improve health outcomes. These include structured, multidisciplinary team care; evidence based biomedical interventions; self-management support; integrated decision support; patient registries and other supportive information technology (IT).[23] This Cochrane Review concluded that four elements had the most direct relationship to health outcomes:

i) increasing provider expertise and skill
ii) educating and supporting patients
iii) making care delivery more team-based and planned
iv) making better use of registry-based information systems.[23]

These components now form the basis of the CDM model. Accumulated evidence continues to support the CDM model as an integrated framework to guide practice redesign.[24] Although work remains to be done in areas such as cost effectiveness, the overall conclusion of published studies suggests that redesigning care using the CDM model improves patient care and achieves better health outcomes.

4.5.3 Constraints on the clinical effectiveness of CDM

Firstly, long-term clinical effectiveness is required. This needs sustained, purposeful collaboration between patient and practitioner; however, the reality is that individuals' illness behaviour and wider social factors powerfully influence this process. Despite having some knowledge of their condition, patients may not fully appreciate their risk of further events and may not feel fully involved in their own treatment planning. Recent studies also suggest that long-term treatment compliance varies by symptom status and illness severity; medication compliance in asymptomatic patients may be 50% or less.[25]

Secondly, guideline recommended treatments and secondary prevention programmes have also been shown to worsen existing inequalities, unless systematic 'inequalities proofing' is used. Secondary prevention has been found to be underused in women and older people with IHD, whilst those in lower socioeconomic strata have been found to be more likely to have angina but less likely to consult their doctor.[26,27] Compared with those who have had an acute myocardial infarction, patients with angina alone appear less likely to receive appropriate secondary prevention.[28]

Thirdly, although the content and aims of evidence-based guidelines on the secondary prevention of IHD are supported by the majority of primary care physicians, unless they receive investment in dedicated clinician time, workforce development and 'whole system' supportive infrastructure (see 3.8), they risk failure.[29]

4.6 Clinical review of clinical decision support templates and workforce needs

Systematic review evidence indicates clearly that some types of clinical decision support systems significantly improve both the process of care and patient outcomes, whereas others do not.[30,31] Specific features associated with more effective systems include:

- Ease of use
- Minimise effort required by clinicians to understand and act on recommendations
- Elicit action rather than passive recording of information
- Justification of decision support via provision of reasoning
- Fit with 'real time' professional decisionmaking processes
- Provide regular performance feedback
- Request documentation of reason for not following guideline recommendations
- Integrated within clinical recording system
- Promote clinician-system interaction
- Involve both practitioner and patient (possibly because they empower patients to become actively involved in their own care)
- Provide actionable advice outside of the clinical encounter

Over the second half of 2013, a comprehensive 'root and branch' review of the clinical content of the current CDM LES templates was undertaken, to optimise alignment with clinical and medical informatics evidence and behavioural change theory. This will result in more intuitive and consistent presentation which does not rely on written text greater consistency in presentation of material across all clinical areas, coloured fields to ease navigation, reduced volume of text, more pictorial buttons and decision trees. In addition to presentation of all information material in line with the medical informatics evidence base, this process has also involved detailed review of all clinical interventions in conjunction with MCNs and establishment of a workforce development programme to assess and respond to the education and development needs of practitioners. We have also engaged the Practice Nurse Forum in this process, to ensure local awareness and practitioner feedback at CH(C)P/sector level.

4.7 Risk stratification

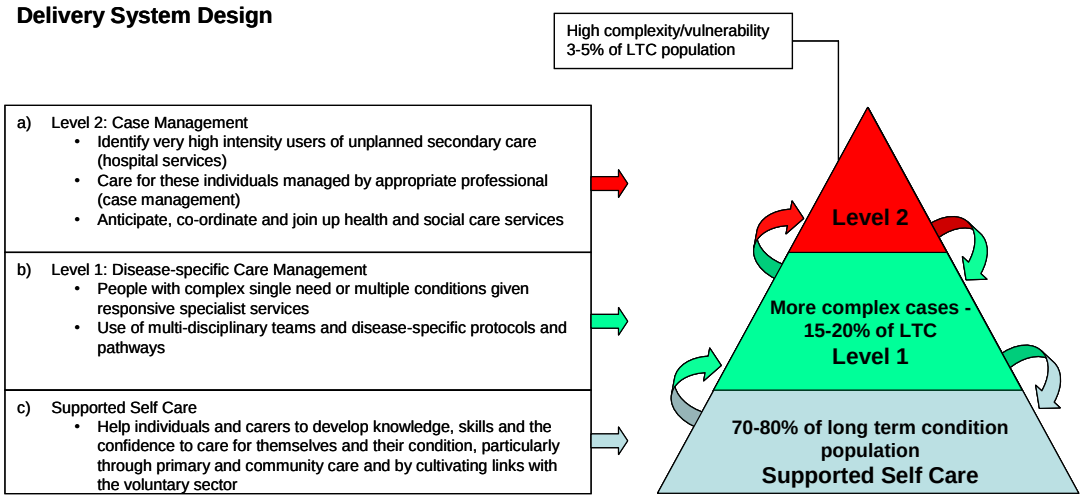
There are three well known service delivery frameworks for supporting people with LTCs, two of which (the Evercare and Pfizer approaches) focus on targeting those at highest risk of hospitalisation, the third (the Kaiser Permanente model) focuses on integrating services and removing distinctions between primary and secondary care for people at all stages.[32] There is no evidence to support one model over another. All three models stratify the population into distinct levels to identify and match up the appropriate levels of care, as follows:

Level 1: Disease-specific Care Management - targets people with a complex single need or multiple conditions, providing information, monitoring and proactive management. The aim is to slow down deterioration and prevent complications necessitating the need for admission to hospital.

Level 2: Complex Care Management - involves the identification of the very high intensity users of unplanned secondary care - people with frequent admissions for one or more long term condition. The aim is to identify and anticipate the care requirements of this more

complex group of patients and co-ordinate a multidisciplinary, multi-agency if required, care package to prevent emergency situations leading to admission (Figure 12).

Figure 12: 'Kaiser Triangle' illustrating different levels of chronic care delivery



Although risk stratification has potential benefits in enabling targeting of interventions towards those at greatest risk, it has four major caveats:

1. Although there are various predictive models which classify patients into risk strata, these are an inexact science at best and are highly reliant on obtaining high quality, detailed data on individual patients. The effort involved in retrieving and appropriately analysing these data may create a distraction from more important aspects of care delivery

2. Risk stratification of a small number of patients may neglect the majority of patients who have greater capacity to benefit from simpler, more universally available cost effective interventions

3. It diverts attention away from effective preventive interventions at an earlier stage in the natural history of chronic disease, where there is considerable potential to 'turn the tap off' in preventing patients from progressing to more advanced stages of disease and/or development of associated comorbidities

4. Trials of supported self care programmes have overwhelmingly been negative and these interventions are far from a 'silver bullet' for transforming CDM systems (see section 4.8)

Taking into account these caveats, work in partnership with the Diabetes, Stroke and Heart MCNs and with GP colleagues was undertaken in 2011, to define criteria for defining lower risk patient groups in the existing LES CDM programme, who could be targeted for less frequent reviews (Table 7). It was, however, considered important that such patients did continue to receive CDM reviews at periodic intervals, as health related behaviours and other factors that determine disease progression change considerably over time.

Detailed discussions, including practice visits, were then undertaken to determine the feasibility of risk stratification at practice level. This indicated that the processes of scheduling patients for different review intervals for the enhanced CDM review would be so unwieldy that they would not justify the administration time involved and would also be difficult to explain to patients. The proposal also generated widespread concerns from other stakeholders,

including health improvement specialists, IMT mentoring and support teams and from practice managers, all of whom had different concerns about the concept.

However, from a public health perspective, this proposal remains a viable proposition which should be considered in future delivery of CDM, irrespective of contracting arrangements.

Table 7: Proposed risk stratification criteria for LES CDM Programme (annual QOF)

	Coronary heart disease	Diabetes	Stroke
Criteria defining eligibility for ES review every 2 years	1. Non-smoker 2. Non-diabetic 3. Receiving lipid lowering therapy 4. No new CVD events in previous 5 years 5. No Left Ventricular Dysfunction	1. No co-morbidity 2. HbA1c < 7.5% 3. Normal BP 4. No Albuminuria	1. Non-smoker 2. Non-diabetic 3. Normal BP 4. No new CVD events in previous 5 years 5. No new functional problems in previous 5 years
% of all patients on relevant disease register who fulfil criteria	**23%**	**11%**	**11%**

4.8 Other components required to support CDM LES

Three additional components require to be in place for effective delivery of a CDM system:

4.8.1 Supported self care infrastructure

Supported self-care (SSC) is a generic term for programmes which aim to teach individuals affected by LTCs skills in self-managing their condition/s, guide health behaviour change, provide emotional support and improve their ability to live functional lives. However, despite its intuitive attractions, SSC is, in practice, challenging to implement and, despite extensive research, there is poor evidence of any impact on health outcomes or use of health care services.[33-36]

A Cochrane Review of lay-led self-management education programmes concluded that although they may lead to small, short-term improvements in participants' self-efficacy, self-rated health, cognitive symptom management and frequency of aerobic exercise, there is currently no evidence to suggest that such programmes improve psychological health, symptoms or health-related quality of life or healthcare use.[33]

In the primary care context, there is high quality evidence to suggest that SSC is ineffective.[34,35] A recently published cluster randomised trial in general practice in NW England whether SSC could improve outcomes over 12 months in patients with diabetes, COPD and irritable bowel syndrome. The investigators went to great lengths to implement a practical trial design; practices were trained to use a range of resources: a tool to assess the support needs of patients, guidebooks on self management, and a web based directory of local self management resources. Training facilitators were employed by the local Primary Care Trust. Primary outcomes were: shared decision making, self efficacy and generic health related quality of life at 12 months. Secondary outcomes were general health, social or role limitations, energy and vitality, psychological wellbeing, self care activity, and enablement. 44 practices and 5,599 patients were involved, representing 43% of the eligible population on the practice lists. 4,533 patients (81.0%) completed six months' follow up and 4,076 (72.8%) 12 months' follow-up. No statistically significant differences were found between patients attending the intervention practices and those attending control practices on any of the

primary or secondary outcomes. All effect size estimates were well below the pre-specified threshold of clinically important difference.

In diabetes, published reviews suggest that individual education has only a limited impact on HbA1c and other outcomes, although the evidence is stronger in relation to group education. In COPD, a large randomised trial of SSC in Glasgow found no overall effects on time to first readmission or death with COPD.[36] Some reviews of group-based education have suggested that educational interventions using the principles of empowerment, participation and adult learning are efficacious, in contrast to didactic interventions focusing on knowledge.

NHSGGC has a Supported Self Care Framework, which helpfully defines the range of interventions which are encompassed within this umbrella term. This can be viewed at:

http://www.staffnet.ggc.scot.nhs.uk/corporateservices/ltc/suppselfcare

The NHSGGC framework's six dimensions are:

1. Patient Information
2. Patient Education
3. Improving Access to Health and Wellbeing Services
4. Buddying/Peer Support
5. Carers
6. Technology/Telehealth

Summarising all of this evidence, trials of formal SSC programmes have overwhelmingly been negative and these interventions are far from a 'silver bullet' for transforming CDM systems. It remains unclear whether this is explained by failure of the concept itself or failure of implementation in busy healthcare systems where time, inertia and competing priorities represent very real barriers. A pragmatic approach for our local CDM system is to ensure that core elements of SSC are present and built into clinical care. This will mean:

- patient information is of high quality and consistently delivered across the entire health and social care system
- all patient education programmes should be audited against standards for empowerment, participation and adult learning
- access to services and support to carers are consistently delivered, communicated, sustainable and equitable across the entire health and social care system

However, more formal buddying/peer support interventions and use of technology/telehealth for health coaching should not be further developed locally in the absence of better evidence to support their effectiveness.[33,37]

4.8.2 Accessible, clinically effective community services

The evidence review (Appendix 2) concluded that getting the basics right – integrated, multifaceted and co-ordinated primary, secondary and social care – is much more important than any single tool or case management approach in CDM. A rapid 'stocktake' of current anticipatory care interventions for LTCs in all NHSGGC's local partnership areas was undertaken in August 2013. Its findings are provided in a separate report.

4.8.3 Functioning service directories

NHSGGC's Long Term Conditions Framework specifies that individuals living with one or more LTCs should be supported to access health improvement, social care and voluntary services. However, at present there is a plethora of online information sources developed by NHSGGC, national NHS organisations and commercial third parties. In response to this, an audit was undertaken in 2012 to identify current service directory information sources relating to health improvement & supported self care. The audit identified the following issues:

- Lack of a single point of access to information for patients and staff with the involvement of numerous local, national and private information providers
- Varying levels of communication between information providers and a general lack of awareness of what is available
- Duplication of content
- Variability in content coverage and levels of quality assurance

The audit recommended that:

- An Information Strategy is developed for NHSGG&C and a group / individual identified to lead its development
- An appraisal and rationalisation of directories is considered
- NHS Inform is considered as the single point of access for health and support service information for patients with data feeds from local specialist information sources
- NHSGG&C develops processes to ensure the timely provision and efficient maintenance of local information
- There be a single point of access for staff into directories for patient self management, with linkages between directories to ensure the pooling of data

The issue remains unresolved, but there is clearly a need to move this important element of 'whole system' support to CDM forward.

5. A vision for the future

High quality, individualised chronic disease management will be delivered by a skilled workforce within primary care, who will deliver a programme of defined preventive interventions to a wider set of chronic diseases. The programme will explicitly provide more person centred CDM care for patients with any combination of comorbidities, using high quality decision support technology. All CDM interventions will be carefully selected based on empirical evidence on health gain and regularly evaluated in conjunction with MCNs, who have a central role in ensuring high value CDM from a 'whole system' perspective. The impact of the programme will shift the focus of service provision from reactive to preventive care.

The CDM programme in primary care will be underpinned by a whole population perspective across all aspects of service planning. Integration of services within the community, across specialties within hospitals, between hospital and the community and between health and social care services will be supported by 'real time' performance feedback on a small set of valid, appropriate indicators available to clinicians and service planners. Specialist advice will be made more accessible via a range of methods. Anticipatory care plans will be routinely available to all primary care and hospital staff involved in the patient's care.

Patients will receive high quality and consistently delivered information, supported by structured, quality assured patient education programmes informed by best practice in adult learning. Informal carers and families will receive consistent support across the entire health and social care system.

6. Recommendations

***Recommendation 1**:*

The CDM redesign programme initiated in 2012 should continue to improve the following six elements:

i. Workforce expertise and skill
ii. Computerised decision support with strong MCN input
iii. High quality, coordinated education and support to patients
iv. CDM care delivery in primary care as part of a wider, coordinated programme
v. Continuous audit and quality improvement to inform workforce support needs
vi. Tackle variations in performance using approaches such as the 'critical control point' analysis used in Keep Well and NW COPD work

***Recommendation 2**:*

The size and characteristics of additional population subgroups (beyond the current set of five chronic diseases) who would benefit most from structured CDM should be defined, explicitly prioritising conditions that make the biggest contribution to our total burden of disease and where potential interventions have strong evidence of clinical and cost effectiveness.

***Recommendation 3**:*

Risk stratification should guide prioritisation of patients who require more frequent or intensive CDM, recognising significant caveats around risk stratification as a healthcare strategy.

***Recommendation 4**:*

The CDM programme delivered in primary care should be integrated into a programme of accessible, clinically effective and evidence based community services

***Recommendation 5**:*

A coherent, functioning 'whole system' service directory should be established to support consistent delivery of CDM across primary, secondary, social care and other community services.

***Recommendation 6**:*

Irrespective of future developments and changes in GMS contracting arrangements, the elements of high quality CDM, as outlined in the above recommendations, should be implemented.

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APPENDICES

Appendix 1: Clinical Services Review: Report on Chronic Disease Management pathway redesign process conducted in December 2013

Chronic Disease Management Pathw

Appendix 2: Clinical Services Review: Long Term Conditions Workstream Report of literature review to inform future service models.

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