Conrane IHS
International Health Solutions

5. Care Co-ordination

A tool kit to model impact
and guide delivery

- Introduction
- What works and why
- Making it happen
- Opportunity, impact and metrics
- Risk stratification and best practice

“ Case management models will not deliver better care for patients and produce cost savings unless they are well designed, involve appropriately and professionally trained case managers and teams, and be embedded in a wider system of care that supports and values integrated and coordinated care. “
Nick Goodwin Kings Fund and colleagues (2013)

A TOOLKIT FOR CARE CO-ORDINATION

Dr David Cochrane, Professor David Colin-Thome and Sue Barrett

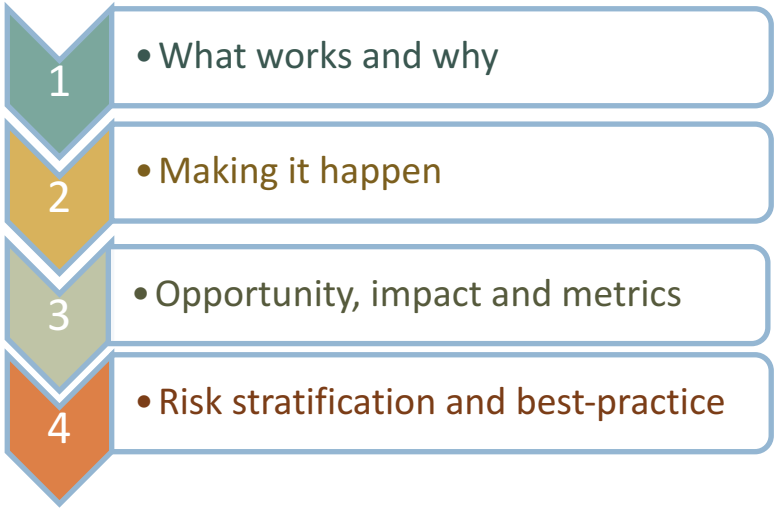
October 2013

Introduction

NHS England recently asked the NHS to focus on the need to better coordinate care for people in later life. Following mixed-results, experience with the implementation of the community matron programme, and pressure on acute care and resource constraint, evidence-based practice is essential to deliver value for money.

Nick Goodwin and his colleagues have highlighted the challenge for delivering effective care coordination and case management within a locality-based, integrated care network. To help address this challenge Conrane International Health Solutions have developed a tool-kit for commissioners and providers alike. For over a decade, our consultants and international partners have led the field in implementing effective models which deliver improved quality of life for patients, value for money and staff satisfaction. Our recent review of the evidence-base can also inform best-practice and impact assessment.

Our experience and intelligence leads to us to identify four key components of our tool-kit. Each of these is the subject of the following four sections as in the diagram.



Section 1 sets out a best practice model, its benefits as well as the evidence and learning which support this. It will be of interest to service designers, within CCGs and providers, practitioners, locality-teams researchers etc

Section 2 explains the key development needs to make effective care coordination happen. It will be interest to CCGs , providers and service development leads, including senior practitioners .

Section 3 A key performance criterion for care coordination is whether they reduce costs and particularly hospital utilisation. This sections quantifies the opportunities for this and highlights key intelligence data for planning and impact assessment. This will be of interest to CCGs, providers and other stakeholders facing the on-going QIPP challenge.

Section 4 show how risk stratification can and should go beyond simply risk assessment and support key stages in the care coordination pathway

Section 1 : What works and why?

How does care coordination work within the multi-disciplinary locality team structure?

How can this dove-tail with the expanding role of primary care in long-term condition management?

What is the evidence that we can improve quality and reduce pressure on our hospitals?

1.1 • The key components of effective care coordination

1.2 • Features of a best-practice model

1.3 • Jim's story – the process and the outcome

1.4 • Why the need for care coordination

1.5 • The benefits to be gained

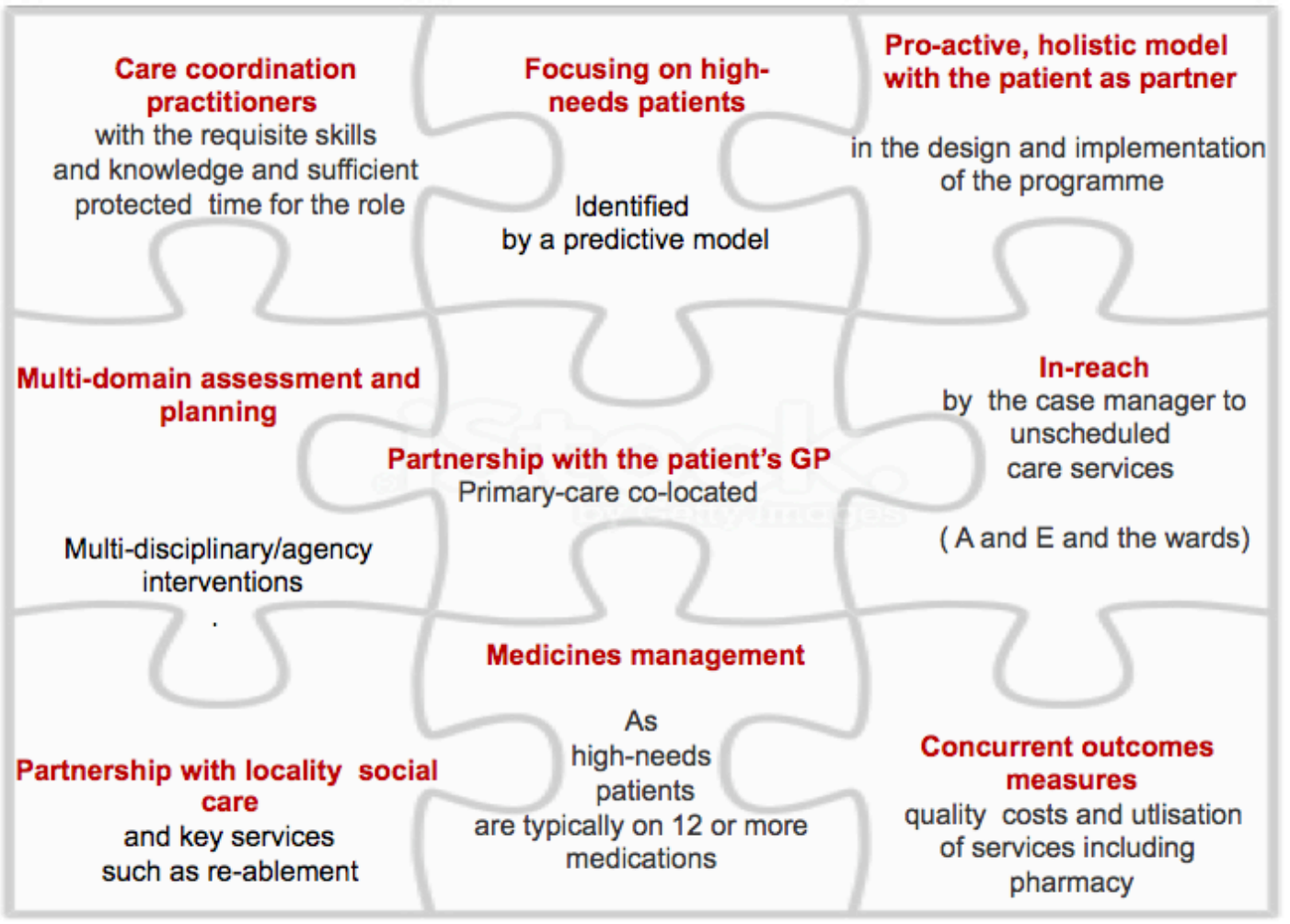
1.6 • UK and International evidence

1.7 • Learning from the last decade

1.1 The key components of effective care coordination

Care coordination is a holistic model delivered by skilled practitioners in partnership with patients, their GPs and other local health and social services.

Outcome data needs to be collected in real or concurrent time to secure and demonstrate value for money



1.2 Features of a best practice model

'These programmes employ proactive methods (predictive models) to identify and outreach to patients who would benefit from this comprehensive set of preventive services. Patients opt into the advanced care management program and received more individually focused assessment and interventions. Interventions include 'anticipatory' assessments; monitoring; self-management coaching; education and counselling; medication management; care transition support; contingency planning and coordination of additional community health and social services.' US Congress, 2011 or see D.Cochrane and S.Fitzpatrick, HSJ 8.12.2005

Key elements are:

Care coordination practitioners
maybe doctors, nurses or other professionals as the role is inter-disciplinary. A competence framework is required as is appropriate training and mentorship

Pro-active, risk stratification
The predictive model needs to identify level 1, level 2 and level 3 patients and support the patient pathway (see section 4)

Patient Partnership
Patients and carers are active participants in care planning, programme implementation, contingency planning and outcomes assessment

Multi-domain, individualized, anticipatory
Each patient will have specific needs which are clinical, psychological and social and which cannot be compartmentalized

Primary-care co-location
Patient's GPs need to be involved so care coordinators need working relationships with specific practices. Meaningful partnership working requires close working no more than 3 average size practices

Social care
As many patients have functional difficulties which impact on their clinical management services such as re-ablement are key

In-reach arrangements
Case managers can lead demand management for 30-day readmissions provided the case manager and local hospital unscheduled care services (A and E and the wards) work in harmony

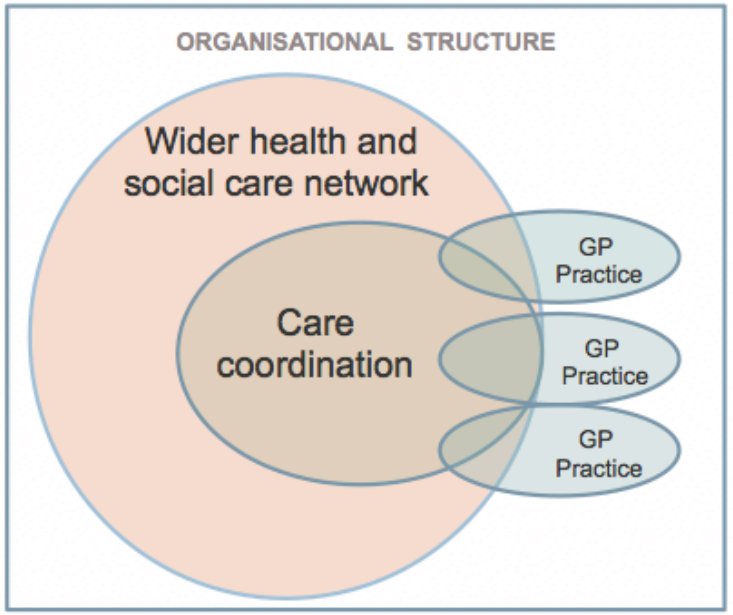
A local intelligence network
Any patient access to secondary services are immediately transmitted to the case coordinator and GP (within 24 hours). Care coordinators also need a directory of all voluntary services in their locality

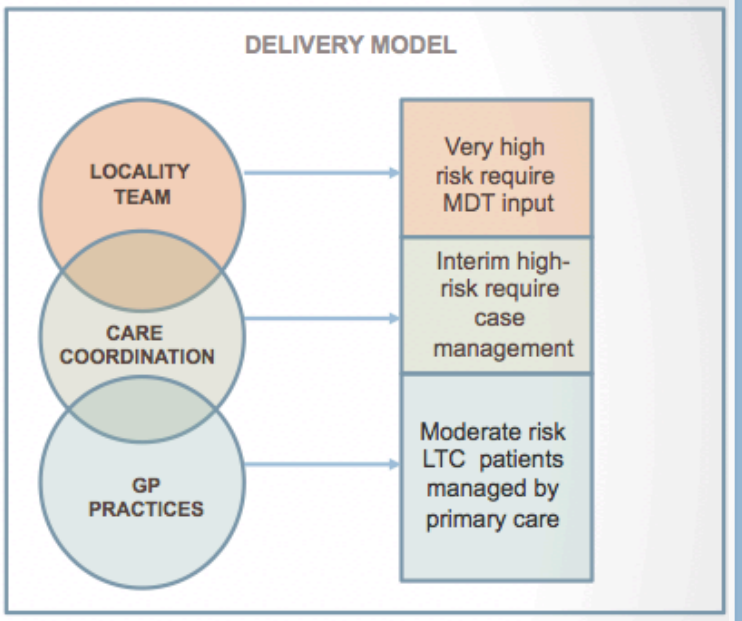
Outcomes monitoring
To many case management projects have failed due to lack of impact data. Also practitioners needs regular feed-back on their own patients to inform reflective practice

1.2.i Locality model of care coordination: a 'house of care'

Care coordinators should be based as a locality level and be part of the locality team. They should be co-located in primary care.

To develop genuine partnership working with GPs, each care coordinator should work with a limited number of practices





Care coordination requires devoted time and should not be entirely vested with practitioners who have other competing core roles. This avoids the risk of care coordination become diluted or de-prioritised. An analogy here is vesting discharge planning with ward nurses whose core role and priority is to manage the patients who are acutely ill.

High-risk patients comprise 5% of a population with average case mix. However this prevalence can vary markedly by locality and practice. Some high-risk patients will require full multi-disciplinary input whilst the care coordinator and the primary care team can meet the needs of others. However the locality also needs to offer services for all patients with LTC

1.3.i A case study - Jim's story

Part 1 The Process

'Jim' is an anonymized patient with care coordinated by one of our expert case managers

60-year old man identified by predictive model

Afraid he was going to die from his COPD

Lived alone, rarely went out and reliant on neighbours

Poor use of medication for multiple conditions (diabetes, hypertension etc)

In the year before coordinated care

9 hospital admits in 9 months - 39 bed days

12 GP Home visits

18 ambulance call outs – rang 999 when he 'felt rough'

Multiple medications

Process

Working with Jim

Gain rapport, confidence

Working relationship based on his priorities and concerns

Develop achievable goals

Clarify' mixed messages' from some healthcare staff

Together created a care plan around

medication, disease process, smoking cessation, weight control, trajectory of symptoms and exacerbations, contingency plan in crisis

1.3.ii A case study - Jim's story

Part 2 The Outcome

'Jim' is an anonymized patient with care coordinated by one of our expert case managers

Integration, coordination, continuity

MDT and agencies involved coordinated by case manager with Jim in control

7 months in Jim supported by telephone

2 Years in Jim is self-managing but values telephone access

What Jim liked

Knowing my team can be there

I understand my COPD

I now rule my life (not the disease)

I understand my medications

I recognise my early symptoms

Outcome

Clinical outcomes

Jim is proactive in staying healthy

Exacerbations under control

Co-morbid conditions under control thru evidence-based treatment and spirometry parameters normalised

Year 2 after care coordination

1 hospital admission only – 2 days

No GP visits needed

£7,000 p.a. drugs bill saving

Jim regularly walks into town, went on holiday for 1st time and plans to marry

1.4 Why the need for care coordination

The NHS is facing a major challenge of managing unscheduled admission by people in later life. Care coordination can help address this challenge. Many patients who currently require acute admission could have been more pro-actively managed prior to the crisis. The type of case-mix with this potential is set out in the adjacent box.

Admitting older people to hospital should be a 'last resort' not a first or only option. For vulnerable people admission to hospital can create more problems than it solves.

Potential to impact on unscheduled hospital activity

Admissions can be prevented of some patients who experience:

- Acute exacerbations of LTCs such as congestive heart failure and COPD which could have been prevented

- Adverse medication reactions due to poly-pharmacy account for 6.5% of all unscheduled admissions according to one recent BMJ study of patients admitted to the Liverpool acute hospitals

- Relatively minor medical problems and trauma in people who are "at risk" due to:
  - Lack of a viable carer;
  - functional deficits
  - and/or mental health needs such as depression

- Self-referral to hospital by patients 'in a crisis' who lack the skills and knowledge to:
  - Managing anxiety and panic – i.e. they have no contingency plan
  - Better navigate the healthcare system to access more appropriate care and support

1.5 The benefits to be gained

In each locality the average high-risk patient costs 5 times the average per capita spend, has six times the average hospital admission rate, 3 times the average GP attendance rate and is prescribed 12 different types of medication.

Successful case coordination should be impacting on this high utilisation and the number of medications to (1) improve patient concordance, (2) reduce admissions due to adverse medication reactions and (3) save on prescribing costs:

Patient experience

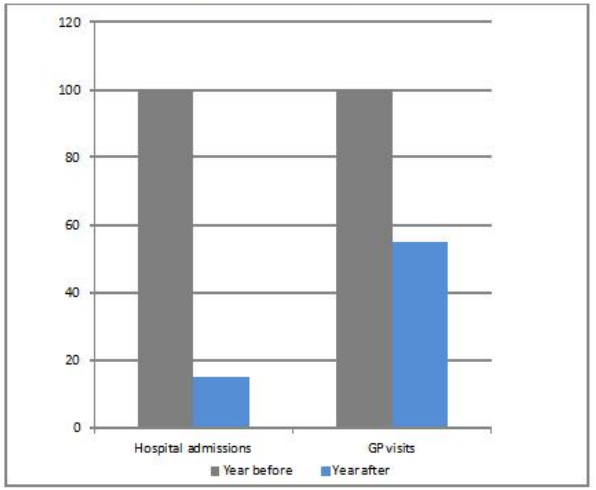
The care coordination patient journey

Beginning	Outcome
Reliant on professionals	Understanding my condition
Powerless and fearful	Control
Isolated and resigned	Participation & motivation
Sickness	Wellness
Depression	Mo-jo returned
Functional Deficit	Activity (ADLs, IADLs)
Access the system in crisis	Navigates
Dependence	Independence
Fragmentation	Coordination by key worker
Confusion and panic	Clarity and contingency

Value for money

Case manager in Southern CCG - outurn after 12 months

Acutal figures standardised to 100



Patient empowerment, enhancement of experience, empowerment and quality of life are key outcomes of effective care coordination

Quality gain produces productivity gain

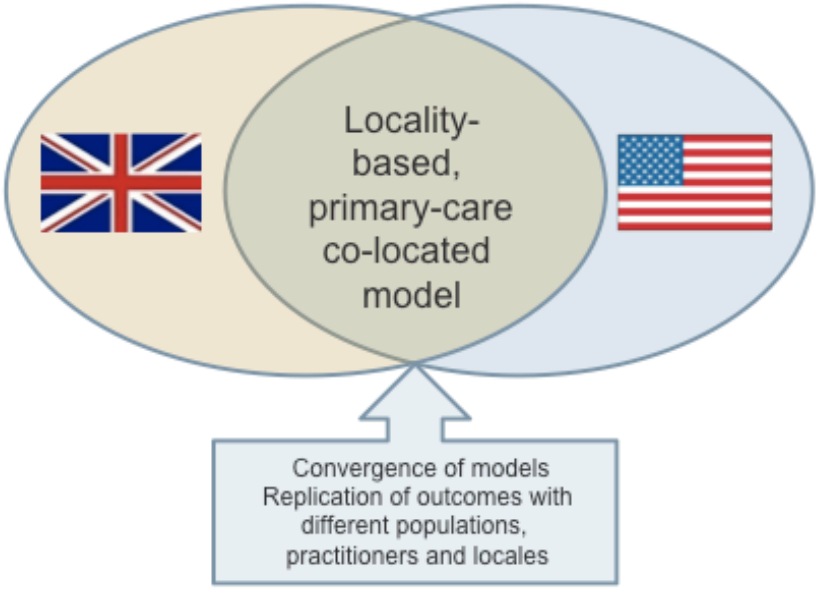
Reduction in utilisation here and in other localities substantially greater than 'regression to the mean'. Also total admission rate for all over 65s reduced compared to control practices

A CCG with a population of 250,000 typically spends £60 million on high-risk patients alone. Hence the opportunity to impact on resource use of patients through effective care coordination is considerable.

1.6 UK and International evidence

There is good quality evidence that care coordination improves quality of care and patient experience. However, a minority of published studies also report significant reductions in hospital usage and costs. Happily, there is an emergent consensus in their recommendations for service design. Indeed by replicating results from our own similar projects with different practitioners in different locales our experience is also consistent. Cost savings can indeed flow from improving the quality of care and the patient experience.'

From the UK Our Consultants have led innovative Care Co-ordination / Case Management projects for more than 10 years, - beginning with Castlefields Health Centre, Runcorn in 2000. As a result of this experience, we have honed our model and synthesized best practice to deliver significant impact on quality, improved patient outcomes and value for money.



From the US For ten years now, the US Congress commissioned independent randomized control trials for care coordination of 14 models in current use. Most models delivered improved quality outcomes, *however a significant minority* also demonstrated statistically significant savings on in-patient and other costs. The successful projects have intervention features similar to those in our UK projects. One model is Johns Hopkins Guided Care ®.

Castlefields Health Centre

"Castlefields practice-based approach has shown impressive results not only in terms of improving patient experience but also in money and beds saved from reduced hospital admissions.. (IHS consultants and US partners) adapted case management to local needs.' A.Dix, HSJ December 2004 Dr D..Lyon,D, J..Integrated .Care, Vol.14. Issue.1. February 2006. *Results replicated in Surrey, Sussex and NW London,* Conrane/Imperial project outcomes , 2007-*11*

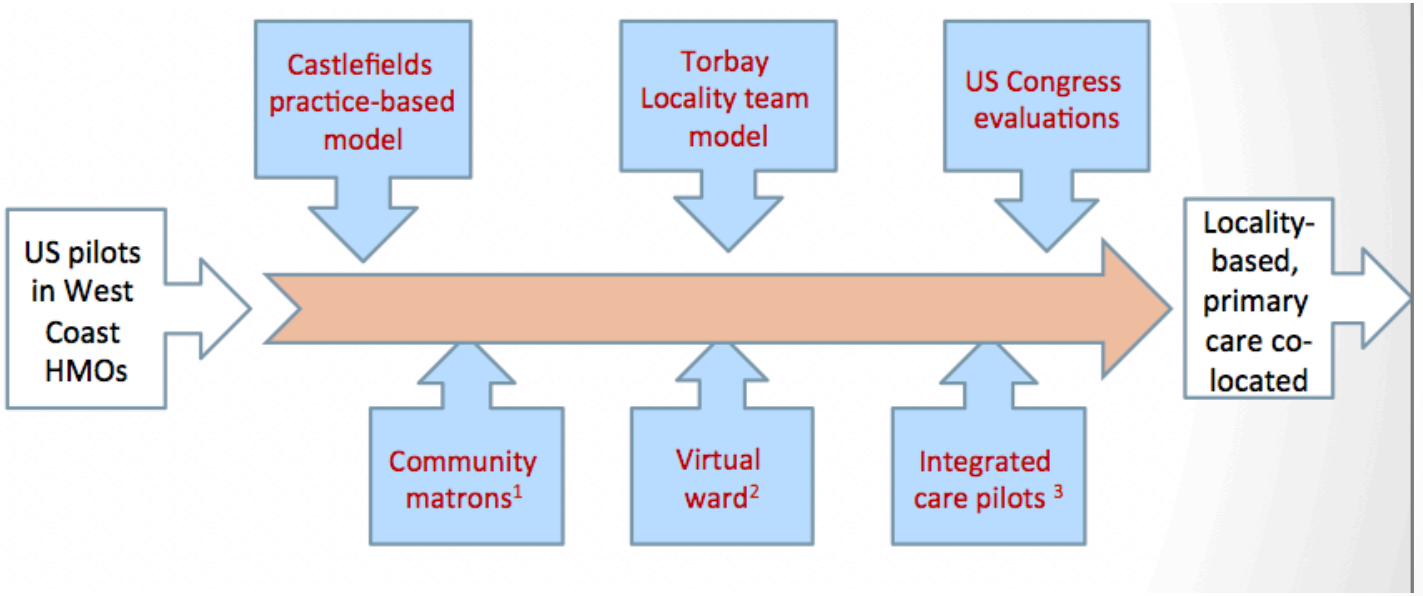
GUIDED CARE

."Guided Care® patients in Kaiser Permanente of the Mid Atlantic States experienced, on average, 52 percent fewer (sub-acute) skilled nursing facility days, 47 percent fewer skilled nursing facility admissions, 49 percent fewer (acute) hospital readmissions, and 17 percent fewer emergency department visits; the differences for skilled nursing facility days and admissions were statistically significant." Science Daily (Mar. 15, 2011) Guided Care® has won a BMJ award for Getting Research into Practice

1.7 Learning from the last decade

The original Castlefields project was inspired by pilots in US health maintenance organisations (HMO) and overseen by the Robert Wood Johnson Foundation.

There have since been a number of key initiatives which have led to our current understanding of best practice. Not all of these have reduced hospital costs but they have contributed to our learning in one way or another.



- 1. Programme now effectively phased out through lack of results
  2. “no evidence of expected reduction in hospital use’* Bardsley et al, Nuffield Trust June 2013
  3. “no evidence that these sites were reducing the level of emergency hospital care”, Nuffield Trust website: national-evaluation- integrated-care-pilots

Section 2 : Care coordination – making it happen

How can we turn theory into practice?

What do we need to have in place to deliver good outcomes on a wide-scale?

Does tele-health have a role?

2.1 • What needs to be in place to make this happen

2.2 • Organisational and capacity assessment

2.3 • Training and mentorship in best practice

2.4 • Content of two training course options

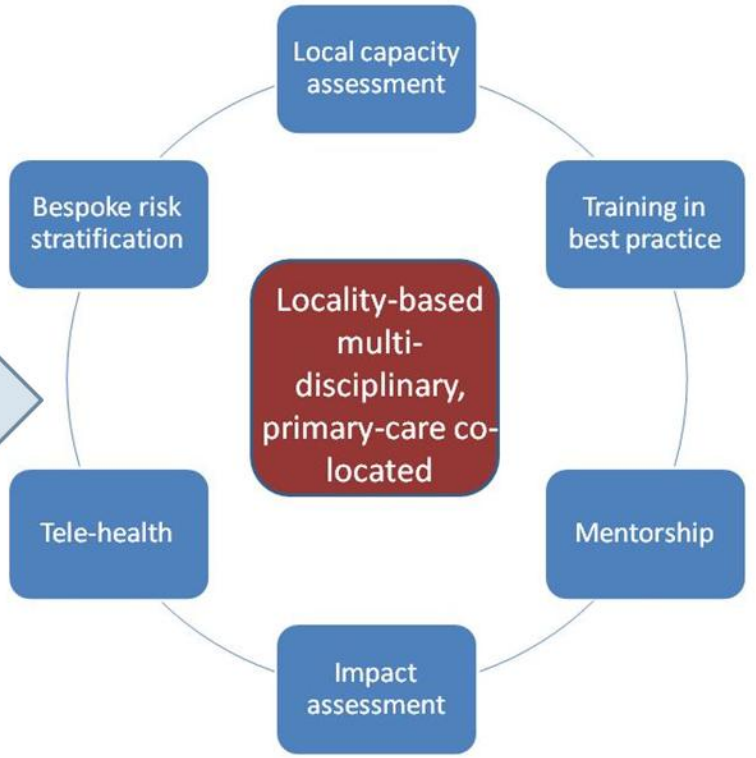
2.5 • Intelligence systems

2.1 What needs to be in place to make it happen

"Case management models will not deliver better care for patients and produce cost savings unless they are well designed, involve appropriately and professionally trained case managers and teams, and be embedded in a wider system of care that supports and values integrated and coordinated care."
- Nick Goodwin and colleagues

Our learning from the evidence-base, best practice and the NHS experience of the last decade leads us to *prescribe*

Six development needs



2.2 Organisational and capacity assessment

Developing 'a wider system of care that supports and values integrated and coordinated care'

As a first stage we need to review the organisational structure, readiness and current policies. We need an assessment of the current workforce capacity against the local needs profile. We can then proceed to a care coordination capacity and organisational development plan

2.3 Training and mentorship in best practice

Developing 'appropriately and professionally trained case managers and teams'

'One key problem with the community matron programme was a failure to transform staff from hands-one 'nurse practitioners' in the home to anticipatory care coordinators'.
Sue Barrett RN

Competence framework develops a practitioner role which is not specific to individual professional background

Capacity and skills gap analysis

How much devoted time by which staff groups

Assessment against care coordination competence framework

Training in care coordination

E-training and accreditation in Guided Care by Johns Hopkins

OR, Face to face programme developed with Imperial College

Expert mentorship

Embed training and transform staff to anticipatory, care coordinators

1 on 1 with expert practitioner, selected cases and competence framework

2.4 Content of two training course options

Our two training options have been designed in collaboration with two of the World's leading clinical training institutes – Johns Hopkins Bloomberg School of Public Health and Imperial College London

Option 1 Delivered on-line

- Inter-disciplinary model
- Motivational work and patient engagement
- Anticipatory assessment and care planning
- Care plan coordination
- Integration of all disciplines and agencies
- Accreditation in Guided Care
- Support from UK-based tutors

Modules also available on managing chronic disease in vulnerable adults

- Diabetes
- COPD
- Coronary heart disease
- CHF
- Falls
- Depression
- Dementia
- Etc

Medicines' management module also available

Option 2 Face to face course held locally

- Inter-disciplinary model
- Designed with Imperial College
- Risk stratification and patient prioritisation
- Motivational work and patient engagement
- Anticipatory assessment and care planning
- Care plan coordination
- Integration of all disciplines and agencies
- Impact assessment and reflective practice
- Taught by UK and international care coordination experts

Feed-back on care coordination training

'Course easy to follow, hurdles addressed quickly
Excellent resource pack
Brilliant teaching and presentations
Excellent knowledge and transfer of skills in LTCs
Case studies- excellent way or problem-solving

Competence assessment by clinicians gives confidence
Excellent opportunity to apply theory to practice'

2.5 Intelligence systems

Used as part of evidence-base practice, telehealth can support key stages in care coordination. With well-designed progammes, telehealth can be a tool to support patient partnership and empowerment.

Risk Stratification not only identifies patients at risk, it should also support other key stages in the care coordination pathway

TELEHEALTH

Developing a Personal care plan

PERSONALISED CARE PLANNING

Supports individualized, holistic care planning, patient self-management, contingency planning and measures patient experience

Partner

Health Fabric

A nurse-led telehealth project for patients with COPD helped to slash unnecessary hospital admissions at an acute trust in Leicestershire. C.Lomas *Nursing Times* 12 September, 2009

RISK STRATIFICATION

A risk stratification solution should inform four key stages in the care coordination patient pathway (see section 4)

Partner

acg JOHNS HOPKINS

Risk stratification should be bespoke to specific local patient needs. Since care coordinators need to be hands on with the tool It should be user-friendly and clinically relevant. Clinicians should play a lead role in user training

2.6. Impact monitoring and reflective practice

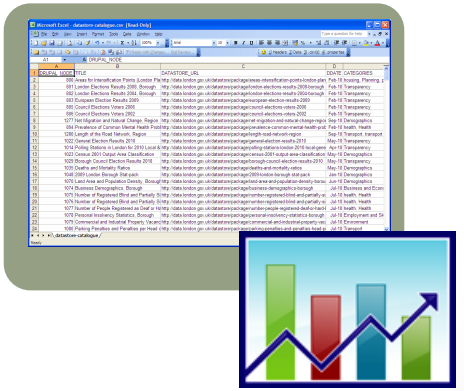
Data from the above systems should provide a baseline for each patient. The data can be captured by intervention to assess its impact on these key outcome parameters over time, by locality, by GP practice etc.

This data should also be provided direct to the clinicians managing the patients, which support reflective practice or clinical audit – facilitating evidence-based practice and securing improved outcomes.

Practice

Clinical Audit

Data



Section 3 : Opportunity , impact and metrics

In a time of financial constraint, the expectation is to reduce cost alongside improving quality of care and patient experience.

What opportunity is there to show congruent cost reductions in the short-term say two years? Also how can we use risk data to inform equitable planning, commissioning, service design, impact assessment and reflective practice?

- 3.1 • Opportunity for QIPP savings in the short term
- 3.2 • Opportunities for return on investment
- 3.3 • Informing planning and commissioning
- 3.4 • Metrics for impact assessment
- 3.5 • Reflective practice

3.1 Opportunity for QIPP savings in the short term

Under a 'house of care' model all patients with long-term conditions benefit from coordinated care. However due to their current costs offer most opportunity for short-term savings. There are two sub-groups of these patients.

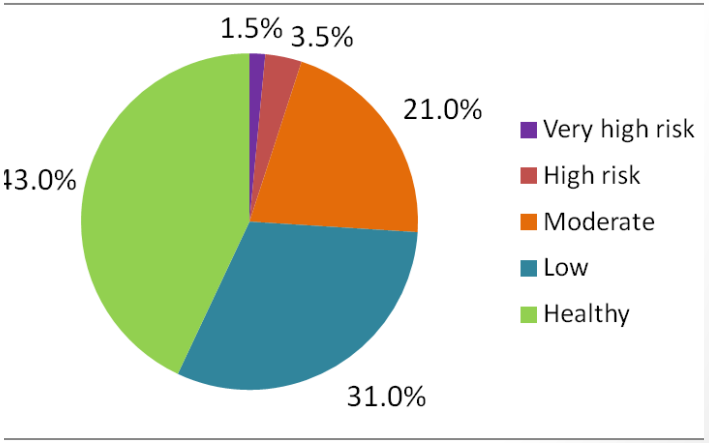
The Johns Hopkins ACG risk stratification tool identifies patients at high-risk and expected high-cost. In a population with typical demographics, ACGs identifies 5% of in this group. Their needs and required service interventions are not homogenous. Although each patient is different, for the sake of analysis we can identify:

(1)All high-risk patients (AHR) are mostly people in later life with multiple long-term conditions, social and psychological needs. They will also include younger age groups with special needs (such as homeless people). These patients can often be managed by a case manager working with the patient's GP. Typically such people will show a combination of multiple clinical morbidities.

(2)At the upper end of the needs spectrum are older people *at* very high risk (VHR) which captures persons sometimes labelled as "*frail elderly" or level 3 patients.* These patients will also often have eroding social support systems, and consequent functional decline. We have found that they constitute 30-40% of all AHR patients or 1-2% of the total population and will usually need input from a multi-disciplinary team;

Both groups generate high health and social care expenditures including future hospitalisations and nursing home placements. They offer the major opportunity for QIPP savings over two years.

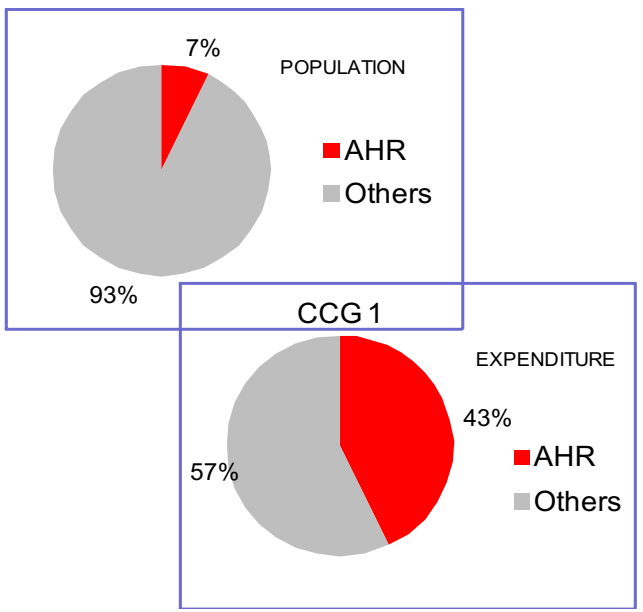
That said there are many more patients with long-term conditions who if offered secondary preventive services can avoid becoming high-risk. They may require investment today to save costs in the *medium term*. Resources released from high-risk patients should be re-invested in these secondary programmes in a 'house of care' model.

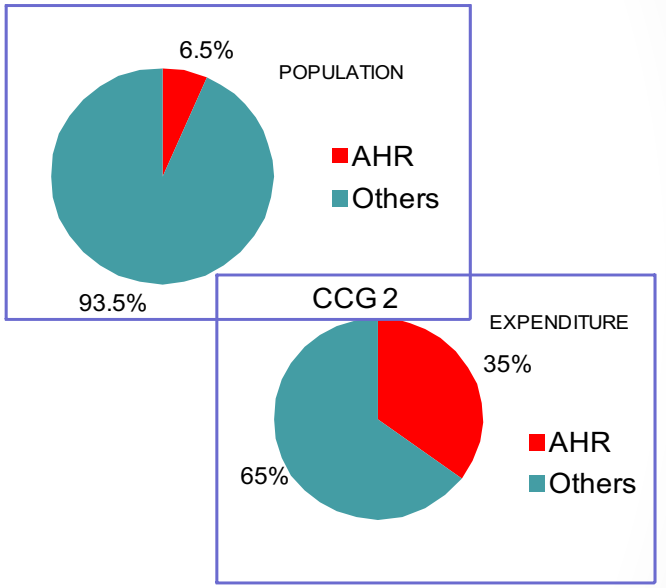


3.2 Opportunities for return on investment

A CCG with a population of 250,000 typically spends £60 million on all high risk AHR patients. Hence the opportunity to impact on resource use of patients through effective care coordination is considerable. The graphic opposite shows a comparison of actual resource use in two separate CCG localities with similar size populations but a different configuration of practices

In *CCG 1* the 7% of AHR patients are currently using 43% of the total resource (hospital and primary care costs) used by all patients in 7 large practices in one locality of 80,000 population.
In *CCG 2*, in a similar size locality with 19 smaller practices the 6.5% of AHR patients are currently using 35% of the total resource.





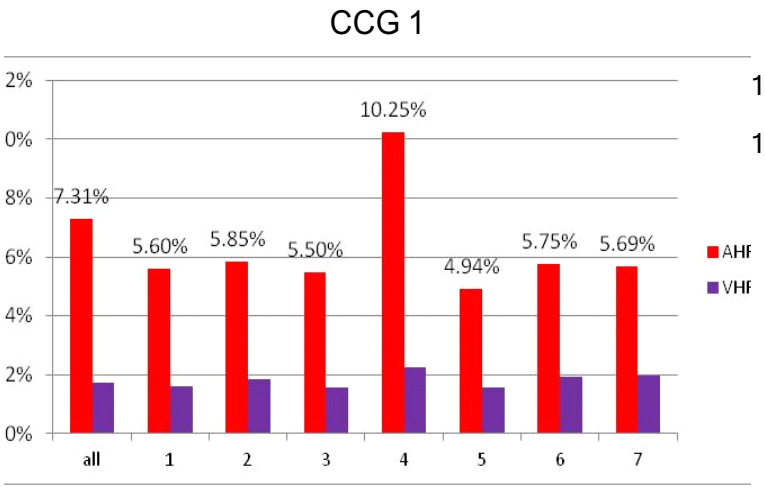
In each locality the average AHR patient costs 5 times the average per capita spend, has six times the average hospital admission rate, 3 times the average GP attendance rate and is prescribed 12 different types of medication.

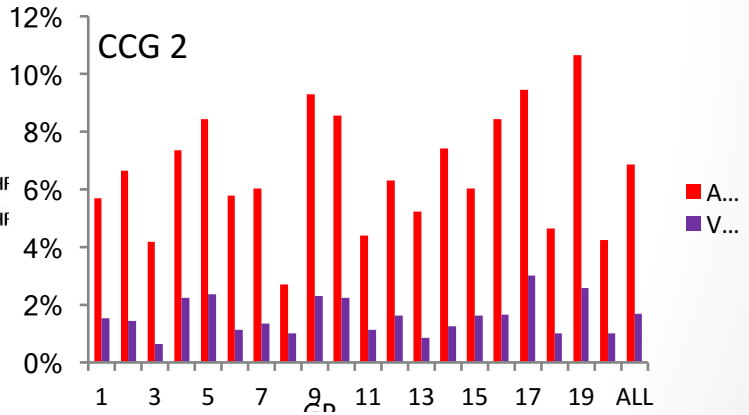
Successful case coordination should be impacting on this high utilisation and the number of medications to (1) improve patient concordance, (2) reduce admissions due to adverse medication reactions and (3) save on prescribing costs

3.3 Informing planning and commissioning

Generally speaking the higher the prevalence of high-risk patients the greater the clinical challenge, the greater the resources required to manage them, **but importantly the greater the opportunity for return on investment.**

5% is an average as prevalence varies by locality and by GP practice. Using anonymised data from two CCGs we can show the distribution of these patients as all high risk ***(AHR)*** and very high risk ***(VHR)***. These variations have implications for resource planning and deployment as illustrated in the charts below. Of 7 large practices in CCG1, practice 4 has more than twice the proportion of AHR patients of practice 5. In the 19 smaller practices in CCG2, the variations are still wider or from 4 to 1, highest to lowest. Both localities have similar total populations.





3.4 Metrics for concurrent impact monitoring

All too often care coordination initiatives fail due to lack of impact or outcomes data. This needs to change. The table shows examples of relevant metrics on utilisation and costs of high-risk patients versus the population as a whole for one of our sample CCG localities

..

Use of services by high-risk patients compared the entire population in one CCG locality

Group	Number	%	Avg.age	Per capita					
				GP visits	No. Meds	A nd E	OPD	Admits	Avg cost
All	65,535	100%	44.9	2.2	3.3	0.2	1.3	0.3	£525
All high risk	4,789	7.3%	69.6	6.9	12.9	0.7	6.1	1.9	£3,898
Very high risk	1,147	1.8%	69.0	8.2	13.5	1.5	9.8	5.2	£7,983

This type of data can be used for impact assessment by comparing

- Patients with a service intervention and those with a similar morbidity profile who not are in receipt of a specific service;
- Patients before, during and after a case management or other care coordination programme;
- Comparing the impact of various programmes available locally to inform decisions about investment or dis-investment;
- Comparing sub-groups of patients by practice, practitioner, locality team etc.

To be of full service to a care coordination programme, a risk stratification informatics tool needs to generate this data. This should be collected concurrently and regularly (minimum every 3 months) for each patient. The tool needs also support aggregation or sub-setting of this data by programme intervention and patient group. (see section 4 on Risk Stratification).

3.5. Metrics and reflective practice

Reflective practice should be a core component of any clinical process.

What would we think of surgeons who did not routinely record and analyse their outcomes and feed this into clinical audit, practice development and productivity gain? There are three benefits when care coordinators to do the same:

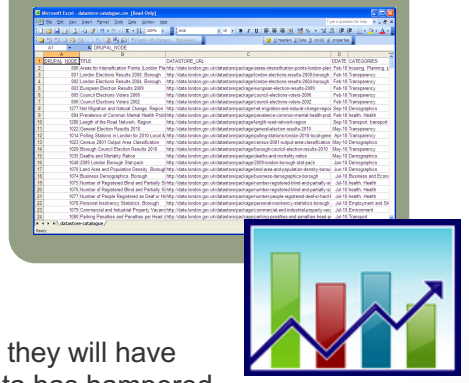
1) The practitioners are more likely to generate good outcomes if they see this data regularly and concurrently. Also the resultant positive feed-back is highly motivational.

2) There is no need for commissioners to rely solely on retrospective evaluations before deciding to invest or dis-invest. This avoids decision-making after the event or 'in the dark'.

Practice

Clinical Audit

Data



3) Where independent retrospective evaluations are commissioned, they will have access to a baseline and enough real data. The absence of this data has hampered evaluation of integrated care, leading frequently to inconclusive findings.

Section 4: Risk stratification and effective practice

How can we employ risk stratification to inform effective practice?

What is the role of practitioners and other clinicians in this process?

More detail on the IHS application of the Johns Hopkins University Adjusted Clinical Groups (ACG) System for predictive modeling and resource allocation can be found on our website at www.conrane.com

- 4.1 • Overview and criteria for selection
- 4.2 • Supporting the care coordination pathway
- 4.3 • Prioritisation and Care planning
- 4.4 • Supporting reflective practice
- 4.5 • What the clinical users say

4.1 Overview and criteria for selection

When considering risk stratification and predictive models, the first question to consider is what are we looking to achieve by implementing risk stratification and predictive modeling? Corollary questions might be, what are we trying to predict? what outcomes are we looking to achieve? how can we best support the care coordination pathway and what is the role of practitioners in the process?

Risk stratification and predictive modeling are often used interchangeably however they are two related activities.

Risk Stratification is the process of evaluating each patient's current health status / morbidity burden, comparing this to the average population as a whole and stratifying the population into groups who have similar levels of healthcare requirements

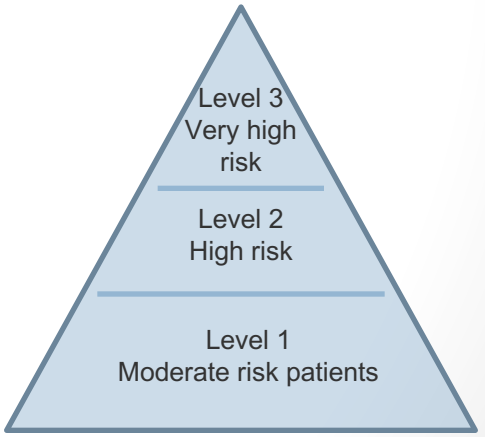
Predictive Modeling tools are statistical models that draw on demographic and patient information to identify individuals and groupings within a population who can be expected to be high utilisers of health care resources, and who will predominantly be people with long-term conditions often in co-morbidity. These models also seek to specifically predict the risk of hospitalisation. Predictive modeling is therefore a key stage in care coordination which aims to improves quality and patient satisfaction, but also reduces both secondary and primary care workload and costs.

So to support care coordination what should CCGs be thinking about when considering risk stratification and predictive modeling solutions?

Key features of interest are

- ***Predictive power -*** Predictive power is measured as C-statistic (relative reliability of the forecast), where a value of 0.5 would be equivalent to chance, and 1 would be absolute certainty. Hence predictive models that achieve in excess of 0.7 are a minimum standard.
- **All risk groups identified** A locality of model of care coordination requires intelligence of level 3, very-high risk patients, level 2, high risk patients and level 1 other patients with long-term conditions who are at moderate risk.
- **Ease of use** To many of these models fall into disuse because of the time required for busy clinicians tto sift through long lists which provide no relevant information other than a relative risk score.
- **Clinical relevance** In our experience, clinicians need to be involved in patient selection and prioritisation.
- **Supports other aspects of the care coordination pathway** in addition to simply assessing risk

Risk pyramid for patients with LTCs

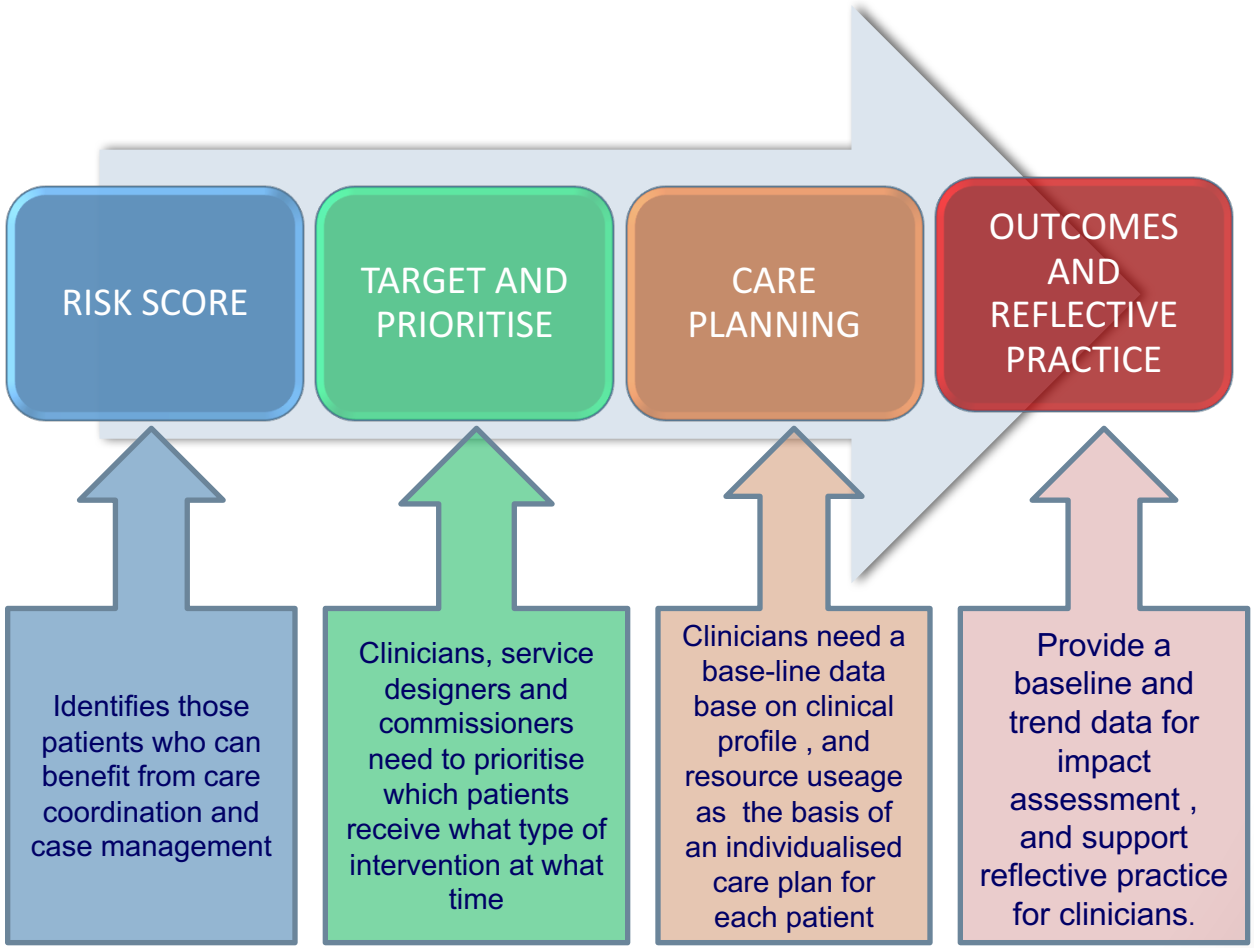


4.2 Supporting the care coordination pathway

Risk stratification tools that only highlight relative risk can be of limited value to clinical staff.

A solution should support the entire care coordination patient pathway

Thus the I.H.S. reporting solution supports each of four key stages of evidence-based care coordination.



4.3 Prioritisation and Care Planning

Let us look at the first three stages in the pathway on page 27

•risk scoring,

•prioritisation

• care planning

Stage 1 – Risk scoring

The reports produced by should provide a list of patients by predictive risk factors such as

(1)The predictive relative risk or risk score to identify level 3, level 2 and level 1 patients

.

(2) The probability that the patient will be high-cost

(3) The *probability of the patient being hospitalised* in 6 months and in 12 months

Stage 2 – prioritisation

Since there are unlikely to be sufficient resources at anyone time to manage all the patients, prioritisation is required. Hence reports should allow clinicians to sort, group and filter on a range of clinically-relevant parameters. :

•Demographics data– age , sex, location
•Long Term Condition diagnoses
•Co-morbidities

Stage 3 Care planning

The tool should provide patients specific information which are needed to begin care planning. These are

Demographic – Age, sex, location

A range of risk markers (see adjacent box)

Utilisation of services and costs in previous 12 months (GP visits, number of medications, A&E visits, outpatient visits and hospital episodes) and associated costs. For example, multiple medication prescriptions is a red flag for concordance problems or adverse medical reactions.

Diagnostic information by long-term condition and co-morbidity

The tool should minimise the need to access a patients clinical records at this point. An access window to the patient's encounter record for primary and secondary is advisible. Hence a clinician can ascertain if a paitent with a diagnosis of COPD is being admitted to hospital respiratory medicine and thus may well be unstable.

4.4. Impact monitoring and reflective practice

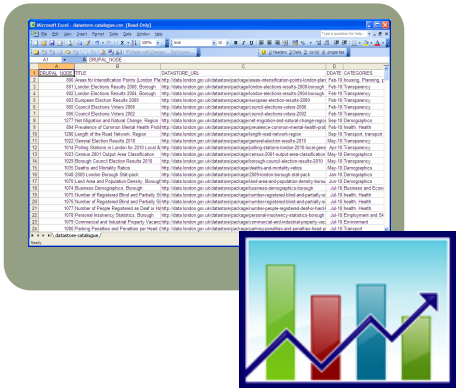
Reflective practice should be a core component of any clinical process.

Metrics data should therefore be provided to the clinicians managing the patients. This supports reflective practice– facilitating evidence-based practice and securing improved outcomes. (see section 2 for more detail)

Practice

Clinical Audit

Data



4.5 What the clinical users say they require

Clinical staff need to be hands on with a risk stratification tool. In our experience, they have quite firm views about how best to achieve this.

The tool should identify patients who are not currently on my radar screen

The tools should be efficient in clinical time and user-friendly We do not have a lot of time to plough through medical records only to find a few patients on the a list requiring revisions to their treatment plans

We need to incorporate social needs indicators

The patients identified should need revisions to their existing plans and not include others for whom everything is being done appropriately

Since patient selection and prioritisation are key to my role *I need to be hands-on with risk stratification*

Our Care Coordination Development Team

Sue Barrett RN MSc Sue is an enthusiastic nurse with advanced nurse practitioner skills and prescribing skills who has worked as a care coordinator since 2005, and as a nurse for 37 years in the NHS. Sue's GP colleague commented "Sue *is like a GP Registrar and is a valuable member of our Practice and the service we provide to our local patients*" Sue is also a Professional Practice Teacher/Educator lecturing at the University of Surrey in care coordination, Health and Social care and Medicines Management. Her successful practice has led to her being invited to give presentations at national conferences by the RCN and the DH..

Dr David Cochrane has extensive experience in whole system redesign and reform. This includes risk stratification and predictive modeling (working with the Johns Hopkins Bloomberg School of Public Health). He has led numerous successful care coordination projects, beginning with Castlefields Health Centre in 2000 - the first successful UK model of primary care linked, case management - rolling this out in in NW London, Surrey and Sussex. David authored the book Managed Care and Modernisation (Mcgraw Hill, 2001) including a chapter by Sherry Aliotta RN (then President of CMSA) on case management.

Prof David Colin Thome OBE (Medical Director) David was until recently the National Director of Primary Care at the Department of Health (DH), a post he held for 6 years. He worked as a GP in Castlefields, which and was one of the first to offer practice-based chronic disease management service and improve quality and reduce hospital utilization. From 1999, Castlefields and his clinical colleagues, pioneered, in the UK, effective case management of complex older people, patients with cancer, and those with mental health.. He is today an established consultant on primary and community care, commissioning, long term conditions management and clinical effectiveness.

Christopher Dickson BSc. Chris Dickson specializes in Health Informatics, novel uses for information and methods of presentation of information to maximize impact. Chris has over 8 years senior NHS Information Management experience (to Assistant Director level), Chris is an accredited ACG informatics consultant. When at Tribal he designed the company's reporting solution for ACGs and is currently doing the same for a bespoke deployment in Cheshire and Merseyside CSU.

Filipe McManus has 12 years' experience working as a Business Intelligence (BI) Analyst for the NHS, specialising in a wide range of reporting software in use in the NHS. He has built various demand and capacity models for individual hospitals and for PCTs. He has a degree in Health informatics. He has worked extensively developing ACG System reports using the latest BI Tools..

Elizabeth Mitcham RN Is a specialist older people's nurse practitioner and worked for 6 years a primary care linked case manager with GP practices in South-West Essex. Liz was also a co-author of the Department of Health's competence framework for community-based case managers.

Jayne Molyneux RN Having worked as a district nurse team leader, Jayne accepted the challenge in 1999 to become the first UK-practitioner in what is now called the Guided Care model at Castlefields Health Centre, Runcorn. Her success in that role led to her being engaged to develop other staff in the model working with I.H.S and subsequently as an independent consultant. Since 2008 she has widened her role to incorporate commissioning and provider development across long-term conditions, integrated care, demand management and QIPP programmes.

Additional case management nurses We benefit from an extended pool of experienced case management nurses who can provide mentorship and peer support as demand requires.

Contact us at

Email: info@conrane.com

Phone: Dr. David Cochrane +44(0)79 7073 9656
Office +44(0)20 7281 2814

Website: www.conrane.com

Conrane IHS
International Health Solutions