Population Health Management:

Opportunities and how to realise them

Conrane IHS
International Health Solutions

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Based on a presentation given by Dr David Cochrane at the Johns Hopkins ACG London Symposium April 7th 2017

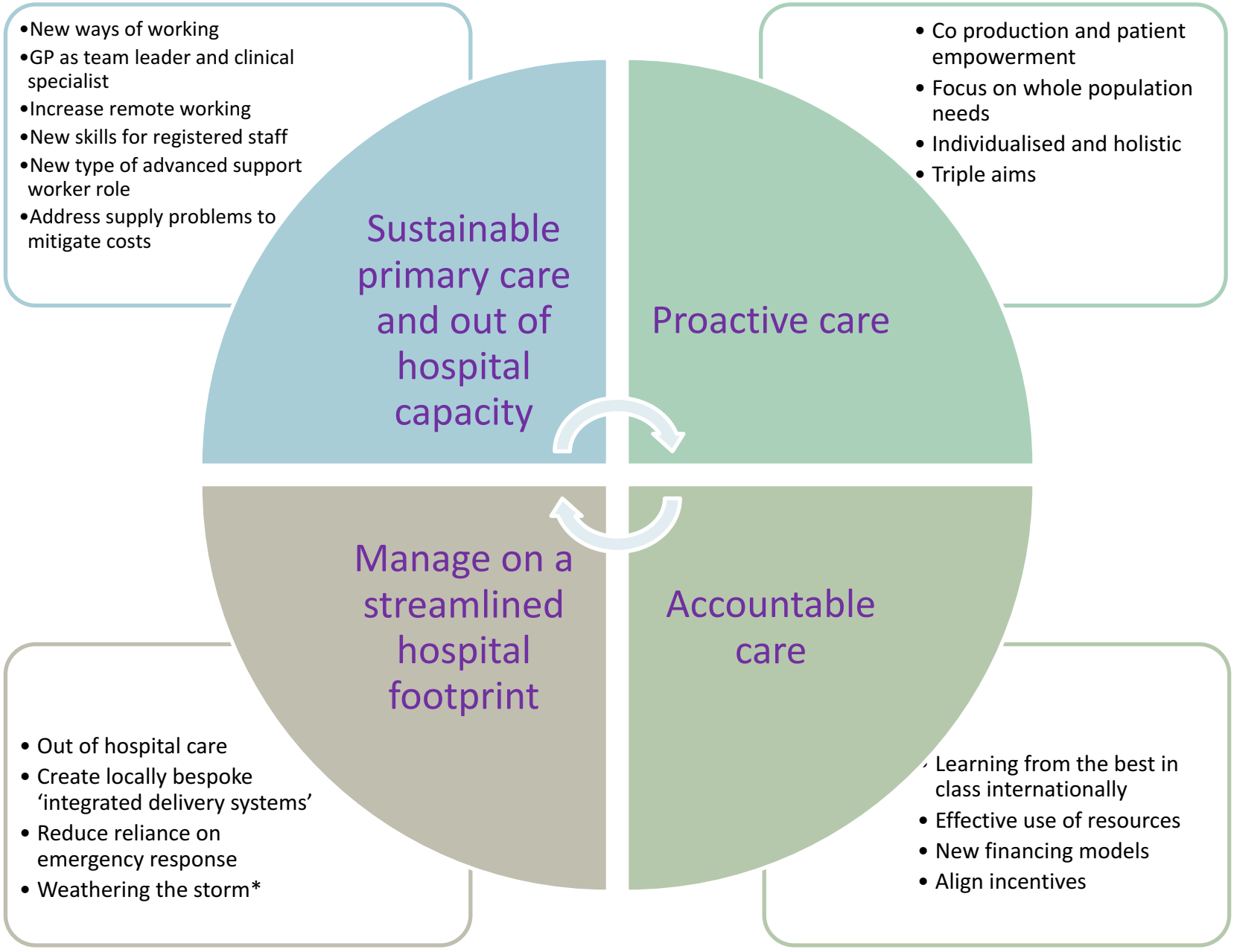
In this occasional paper we look at how whole population health management can progress the objectives of Sustainability and Transformation Plans (STPs).

Whole population health management is Ed Wagner's own extension of his Chronic Care Model and has been tried and tested in his home Accountable Care Organisation – Group Health. The approach we propose draws on current practice both within the NHS today, and international models which are delivering these objectives today and could be readily adapted to the NHS. Our other papers have agreed with the Kings Fund that more capacity is required in primary and community care. Since 90% of this capacity is workforce, we also look at how staff supply and skills can be improved drawing on evidence from the UK sources such as the 2015 Primary Care Foundation Report: *Making Time in General Practice*.

Over the last 2 years we also have worked with a number of Vanguard Projects including a Multidisciplinary Community Provider using a hub and spoke delivery model. We also work extensively on new ways of working, evidence-based pathways and triple-aims outcomes measurement. We specialise in workforce development in acute, community and primary care in the NHS. We also develop competences, occupational standards and have been successfully training staff in managing patients with complex needs for over 10 years – adapting international best practice and learning to the needs of the NHS at local level.

We are therefore confident that *NHS locally-bespoke* whole population management can be successfully implemented within a four-year timeframe as part of STP implementation and enhances MCPs and Primary Care Homes,.

Key themes of STPs addressed by whole population health management



SEE ALSO http://conrane.com/wp-content/uploads/Acute-pressures-on-the-NHS-A-perfect-storm.pdf

1. Overview

Core to most Sustainability and Transformation Plans, STPs is a focus on more pro-active care for people with chronic disease. For example, in one large STP footprint (1) , an analysis of the population using the Johns Hopkins ACGs risk adjustment tool has highlighted the opportunities for proactive programmes with co-production as a core objective. 23% of the population could benefit from supportive self-care, to save potentially £65m in hospital tariffs. They have differing levels of needs and thus support requirements from health and social care. This is also evidenced as the best means of reducing admissions (see page 4)

Core components of the service profiles are care coordination or defragmentation and aligning the interventions with the needs profiles of those sub-sets of the population who can most benefit from. Nationally about 1 in 4 people have at least one long-term condition. This proportion increases with age, deprivation and some aspects of ethnicity. This population is not homogenous and exhibits a range of needs from patients with a stable, early on-set condition (which can be managed within enhanced primary care) through to co-morbid patients with high complexity, and end of life care. Hence in order to align interventions to differential need:

- *The single condition management service* is aimed at patients with a single condition which due to degree of progression, instability and adherence challenges require levels of intervention and support which cannot be offered within enhanced primary care. This service can be led by a competent medical assistant working under the supervision of registered staff .

- *Clinical care coordination* is aimed at multi-morbid patients: those with a degree of complexity but who can be transitioned to supportive self-care with an intensive but time-limited programme with a practitioner and the primary care team. This is co-production model.

- Advanced Illness including those with high degrees of complexity and major functional deficit which required a more protracted case management programme involving a multi-disciplinary team.

- Both services will be offered to nursing and residential home residents whose staff act as carers.

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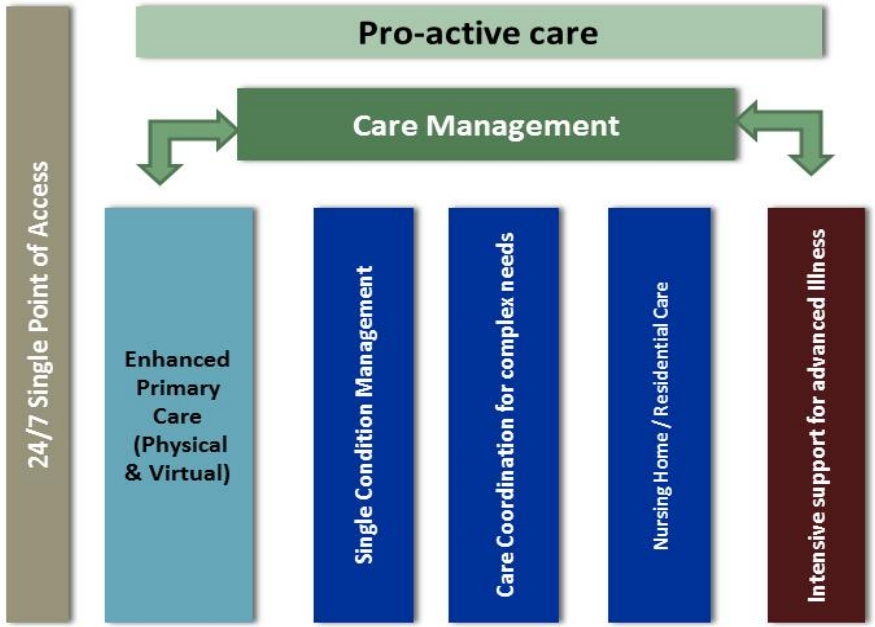
The services access initially via the 24/7 single point of access at which point referrals will be initially triaged. Patterns of need will be initially articulated using risk stratification and evidence-based referral guidelines and then confirmed and elaborated during detailed assessment at patient enrolment process. Interventions will be delivered by a key worker with multi-disciplinary team support for the most complex, through face to face contact and/or virtually using telephonic coaching and assistive technology.



Structure of the document from this point.

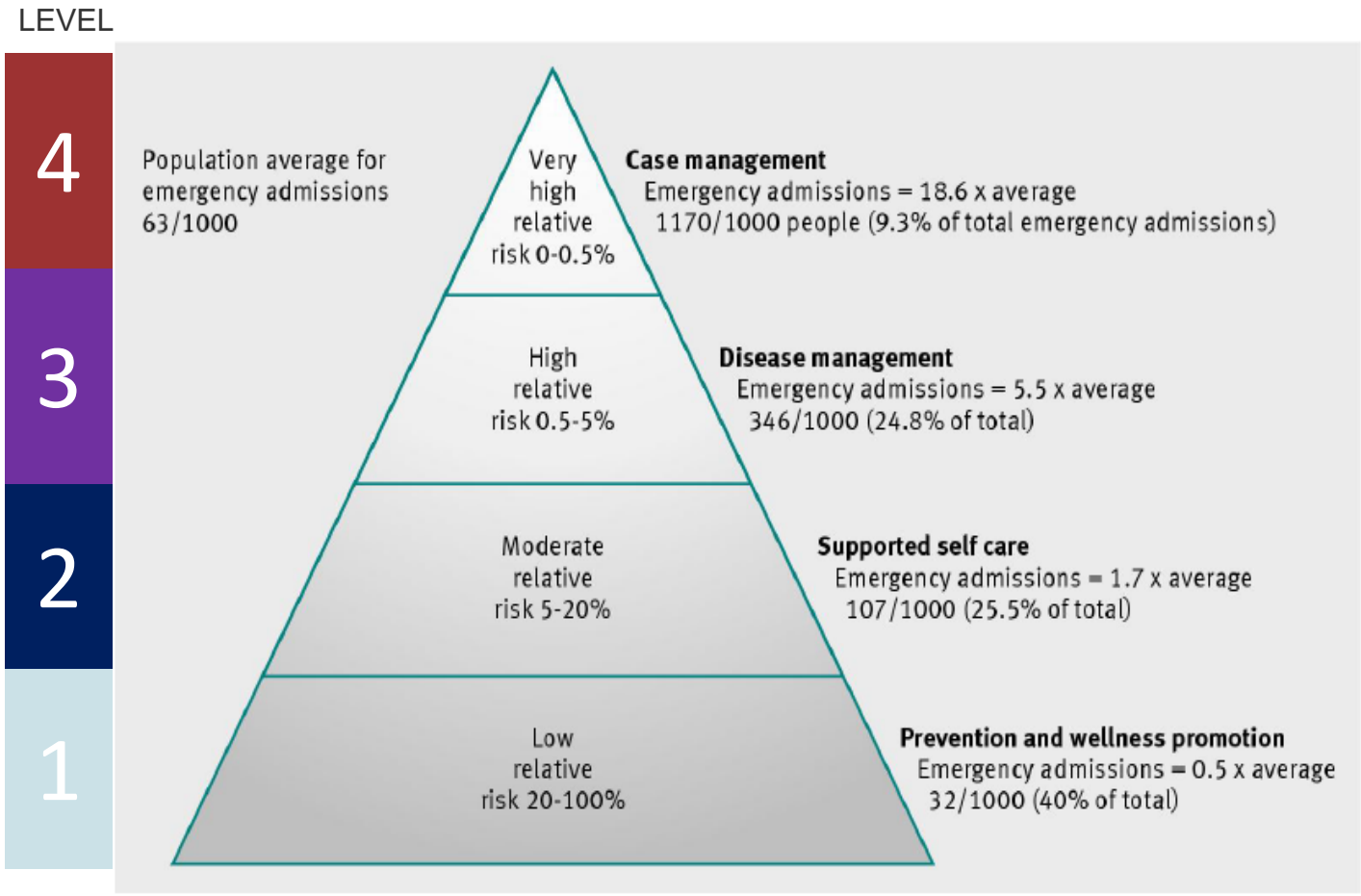
In section 2 we set out the expected population sub-sets to be offered condition management and complex case management. 4 levels of need are identified.

Section 3 covers patient identification and enrolment,, process descriptions and management pathways *for levels 2, 3 and 4 patients* and expected, patient engagement periods with the services and on-going referral.

Section 4 sets out the key workforce roles and decision-support tool requirements

Evidence shows to manage hospital admissions at scale we must address the whole spectrum of need

The limitations of the top 0.5 to 2% focus common in the NHS*
Confirmed by a recent analysis in a large STP footprint (see Text)



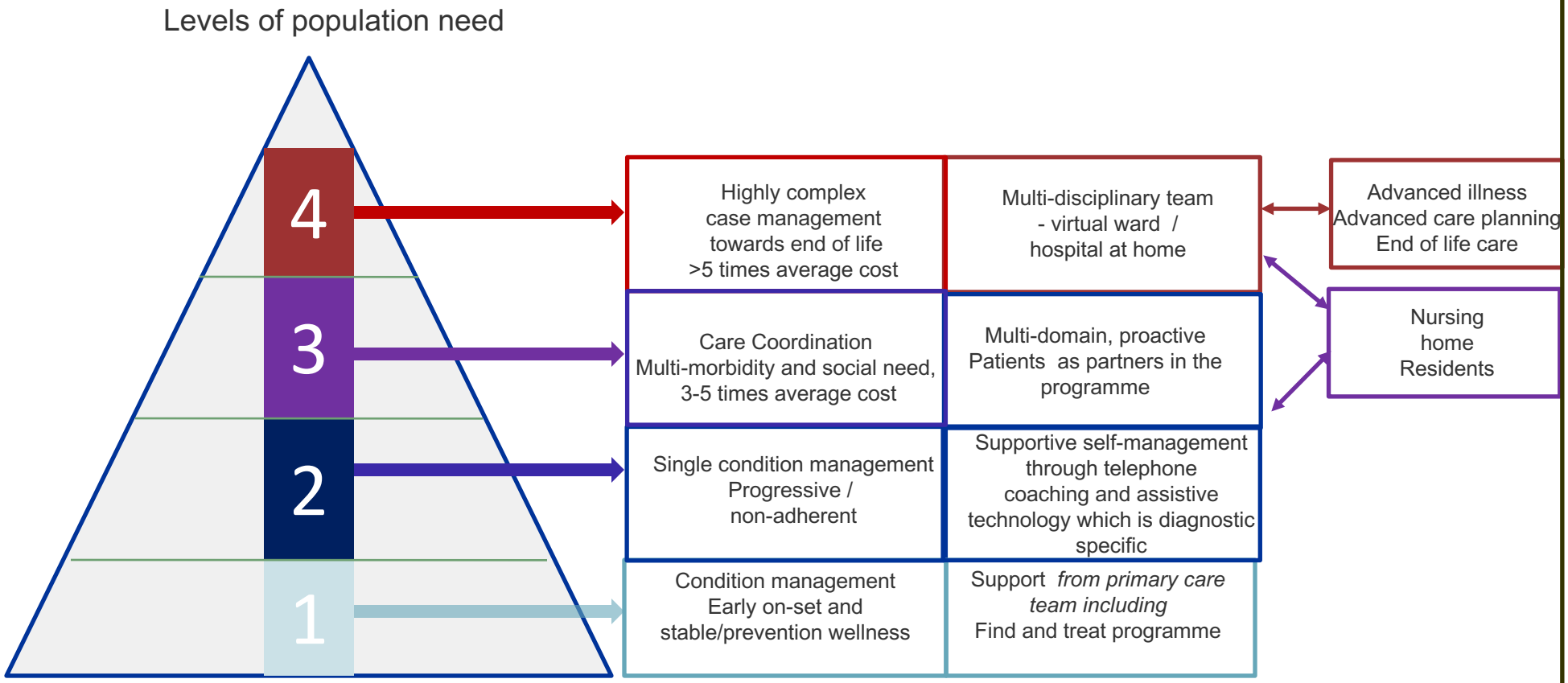
*Many models are based on an assumption that interventions should focus on people at greatest risk of hospital admission..The epidemiologist Geoffrey Rose pointed out a potential pit fall in this argument. High-risk patients don't actually account for most admissions. Most admissions come from lower risk patients, Indeed in order to reduce emergency admissions by 10% by concentrating just on the 0.5% at highest risk of admission, more than the total number of admissions in this group would need to be avoided (107.5%). If the next group down were the focus of an intervention (the 4.5% of the population at high risk), 40% of their admissions would need to be avoided to produce an overall 10% reduction with the high risk group, An alternative approach is to target the intervention on a much larger group. This is shown in the diagram opposite. **

Fig 2 Rates of emergency hospital admission by different risk patients (based on Wennberg et al 1996).[9] Percentage of all emergency admissions is equal to the relative rate multiplied by the size of the population group

* Source: **Martin Roland et al: Reducing emergency admissions: are we on the right track?** ***BMJ*** 2012;345:e6017doi: 10.1136/bmj.e6017 (Published 18 September 2012)

2. Populations subsets and levels of proactive care

The schematic represents the sub-sets of need within the population with at least one long-term condition:
(described in narrative on the next page)



These subsets represent more of a continuum than precisely differentiated, homogenous groupings. In terms of prevalence, the proportion of patients in the population with one or more long-term conditions varies with a local health economy's age profile, ethnicity, deprivation and ultimately case-mix

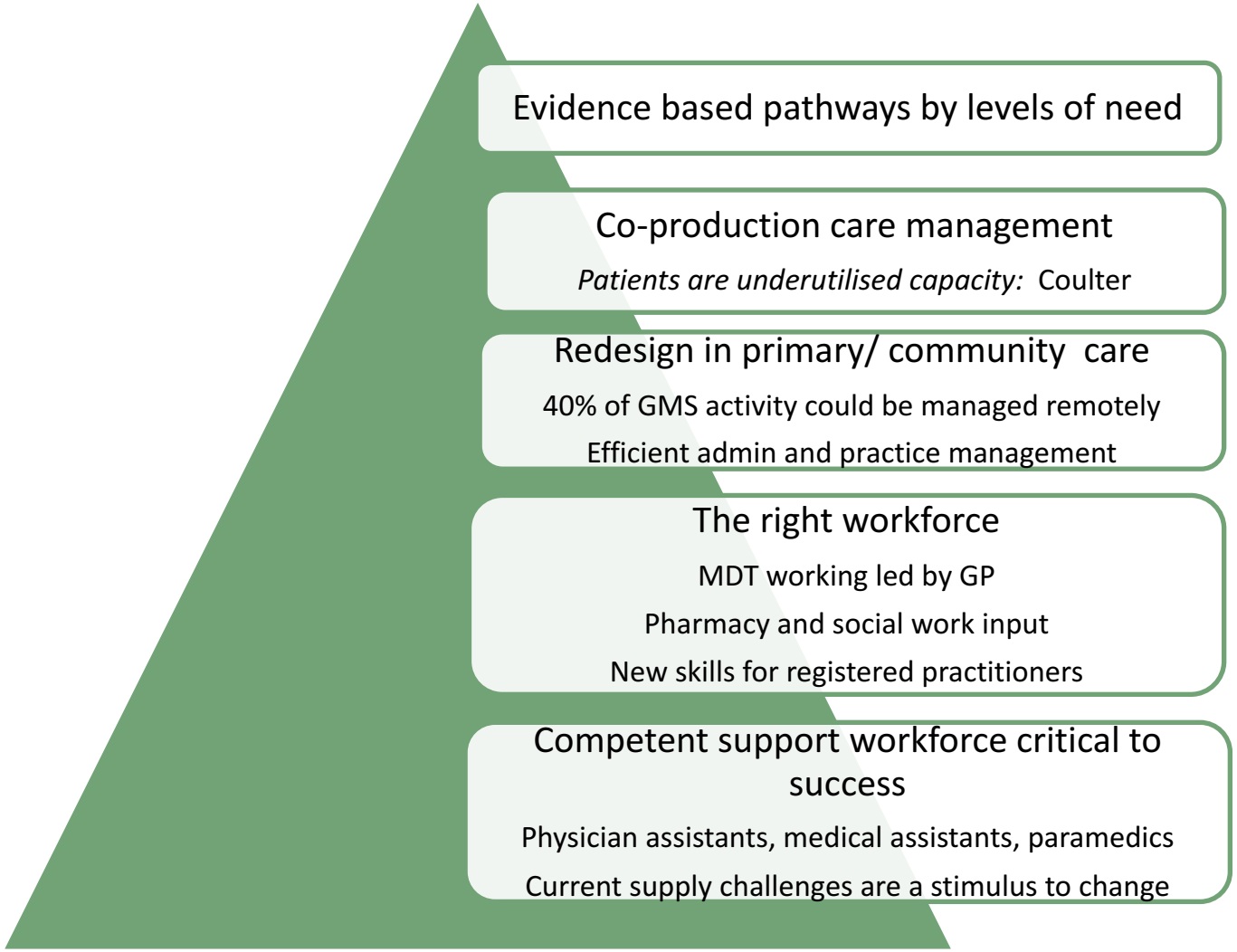
2. 1 Populations subsets needing whole population management

Description of the sub-sets of need within the population
*Level 1 condition management patients (managed by enhanced primary care) Targeting low risk populations 6*arly diagnosis of a single long-term condition which may need daily medication or life-style management such as diet. Patients will be capable of self-management and adherence and thus require only intermittent monitoring by the primary care team delivered by periodic review (depending on the diagnosis). Includes a 'find and treat' programme for pre-diagnosis patients at risk. Also secondary prevention and wellness maintenance
Level 2 condition management patients Targeting moderate risk populations, focused on managing 'climber' population to maintain health status and/or prevent exacerbation. These patients will have a predominant single life-threatening but manageable long-term condition such as: diabetes, COPD, CHF, IHD, and sometimes alongside this less serious conditions such as blood pressure. They will be on a treatment programme which requires specific significant clinical management such as daily medication, and monitoring such as weight, blood pressure, blood sugars etc. These patients will require regular support contact to remain adherent to treatment programmes.
Level 3 patients represent 90% of multi-morbid patients (range of 3-7% of the total population) often with associated social and functional needs but not only less complex than level 4 (below) they can benefit from a time-limited intervention. They will be typically be consuming between 2 and 5 times the average per capita cost, be at high risk of future admission, and have been in receipt of care from multiple practitioners in the previous 12 months. They will have high potential for self-management and motivation to engage with services more pro-actively. Initially engaged and assessed face to face, once care plans are in place, they may be transitioned to self-care with primary care team support or transfer to virtual management and coaching alongside level 2 patients.
Level 4 highest-risk patients represent around 10% of multi-morbid, complex needs patients (typically 0.5% of the total population), with progressive disease profiles, and very significant cognitive and functional deficits; often house-bound. They typically consume > 5 times the average health care costs(secondary and primary care) and have experienced two or more unscheduled hospital admissions in the previous year. They have limited potential for self-management upon assessment, require the input of a multi-disciplinary team and need regular contact with services over a relatively protractive period. Some level 4 patients transition to advanced illness defined as being in last 12 months of life. The intervention then focuses on the development of an advanced care plan and explicit end-of life goal setting, as well as symptom management.
Advanced illness : Targeting individuals identified as being in last 12 months of life. Focused on development of anticipatory care plan and explicit goal setting, as well as symptom management.
For residents of nursing / residential home offered bespoke care management services: Targeting nursing home and residential care population (e.g. frail elderly, young people with physical disabilities), MCP care managers and nurses working in collaboration with the partners to provide care coordination and case management to all patients living in care homes. Nursing home case managers allocated to set care homes in order to respond early, provide preventative oversight, monitor changes, and communicate with treating GP. Supports early identification of an exacerbation of an illness allowing for early and proactive treatment. Includes step-up programmes to match exacerbating cases to the right clinical resource and settings (e.g. capacity planning intermediate care resources).

Applying the learning from the more successful Accountable Care Organisations – 'Revitalising Primary Care'

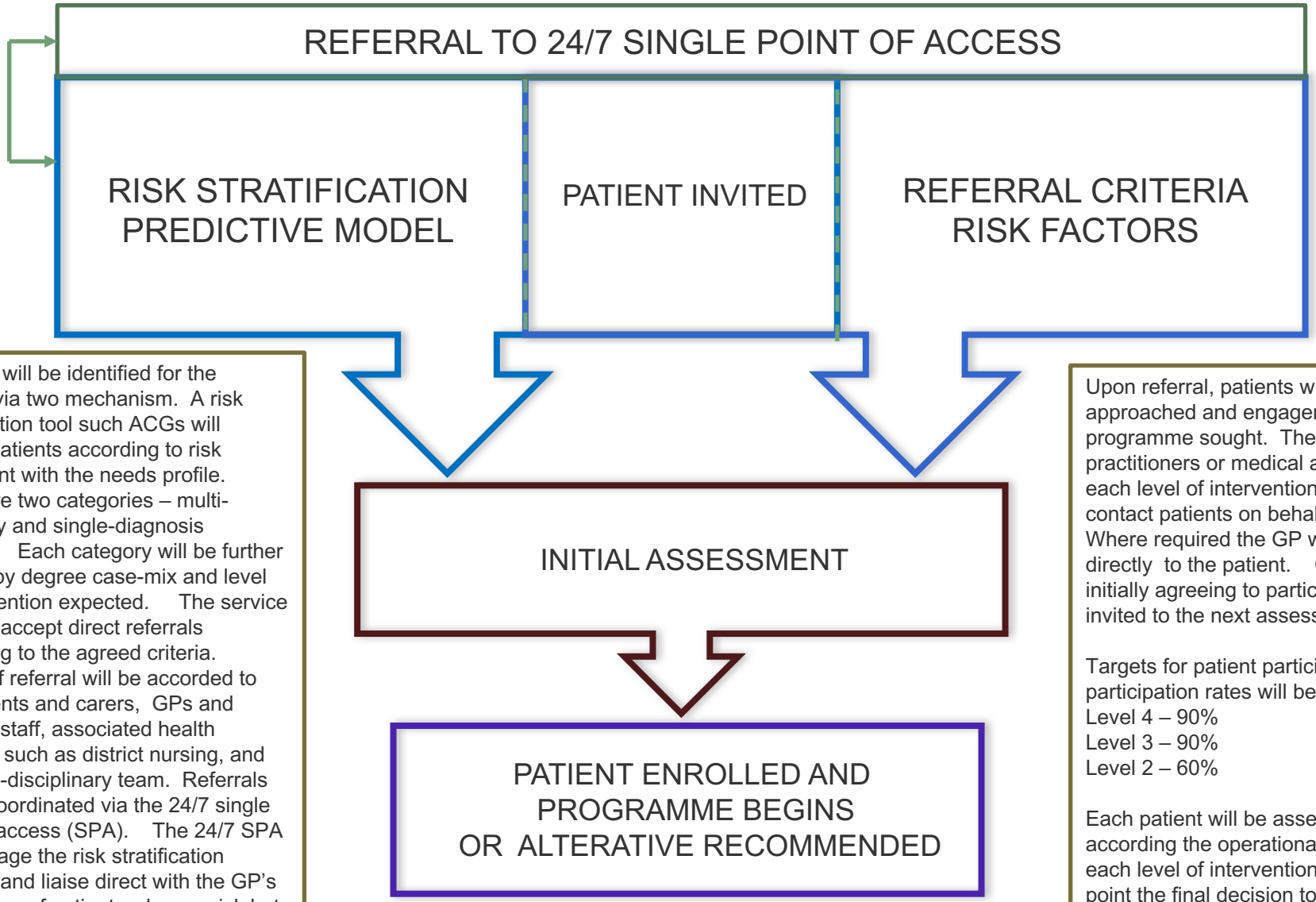
The development of STPs and experience from Vanguards has heightened in interest in Accountable Care Organisations in the NHS. This page shows the key learning which is relevant to the NHS as we seeks to implement STPs. as explained on subsequent pages. Developed largely under the US Affordable Care Act, these organisations are changing the way care is organised, financed and performance monitored. There are number of Pioneer ACOs which participate in a national evaluation scheme. They use the triple aims framework of (i) patient experience, (ii) clinical outcomes and (iii)
overall cost control.

One of the most successful ACOs on all 3 criteria is Group Health which serves 500,000 people in Seattle and hinterland. It is a good model since it was established as a cooperative in the 1940s and like the NHS provided primary care from day one. It is the practice home of Ed Wagner. *The appendix to this document has more detail.* Not least it has demonstrated the positive effects of redesign and workforce development on delivering triple aims and reducing hospital utilisation, but also on addressing an emergent and pressing new challenge in the NHS, *sustaining staffing supply in primary and community care**. This issue as it effects the SW of England was reported in the Guardian of April 12th 2016 (see url)*.



* URL https://www.theguardian.com/society/2017/apr/12/two-in-five-gps-in-south-west-of-england-plan-to-quit-survey-finds

3. Patient identification, and enrollment - (Approach tried and tested in current NHS Conrane Projects)



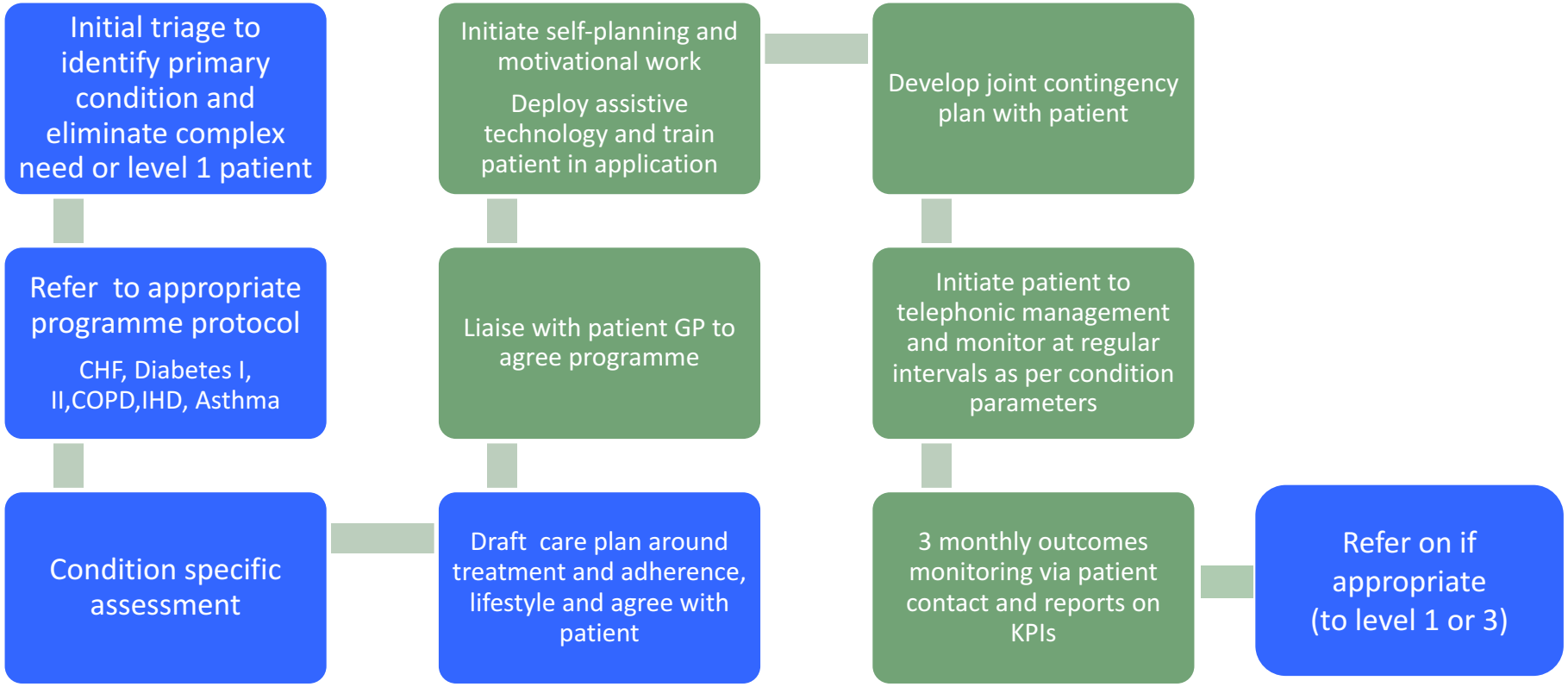
Patients will be identified for the service via two mechanism. A risk stratification tool such ACGs will stratify patients according to risk consistent with the needs profile. There are two categories – multi-morbidity and single-diagnosis patients. Each category will be further divided by degree case-mix and level of intervention expected. The service will also accept direct referrals according to the agreed criteria. Rights of referral will be accorded to the patients and carers, GPs and practice staff, associated health services such as district nursing, and the multi-disciplinary team. Referrals will be coordinated via the 24/7 single point of access (SPA). The 24/7 SPA will manage the risk stratification process and liaise direct with the GP's and advise of patients who are risk but have not yet been referred,

Upon referral, patients will be approached and engagement in the programme sought. The lead practitioners or medical assistants at each level of intervention will initially contact patients on behalf of the GP. Where required the GP will write directly to the patient. Only patients initially agreeing to participate will be invited to the next assessment stage.

Targets for patient participation rate participation rates will be:
Level 4 – 90%
Level 3 – 90%
Level 2 – 60%

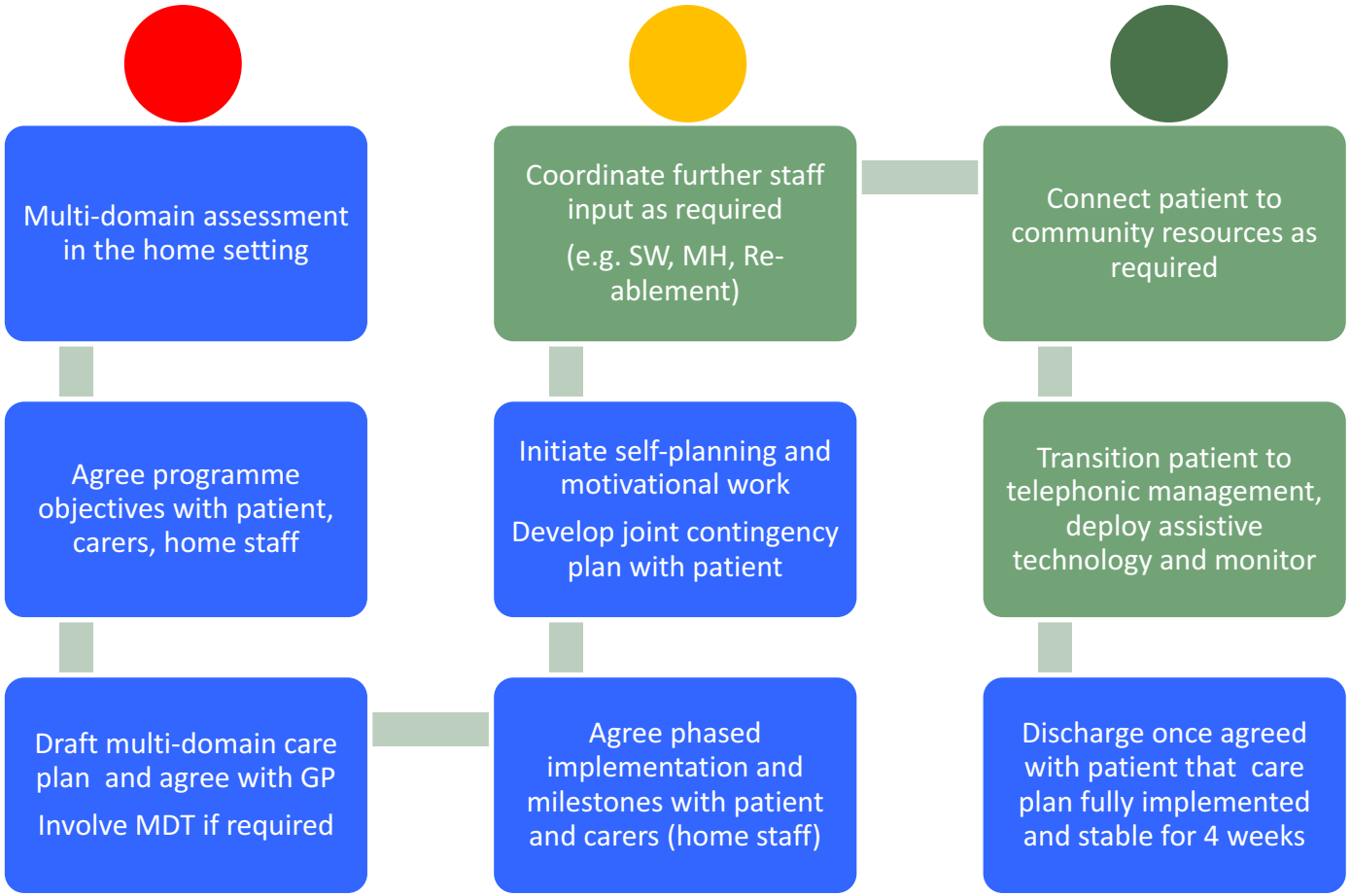
Each patient will be assessed according the operational policy of each level of intervention. At that point the final decision to enter the patient into the programme is made.

3. 1. Management pathway for level 2 patients (detailed pathway is condition specific)



3. 2 Management pathway for level 3 patients

(detailed pathway is patient specific: this pathway has been developed, tried and tested in numerous Conrane Projects drawing upon the best international practice)



Stage of care led by

- Clinical care coordinator (registered)
- Medical assistant

3 monthly outcomes monitoring via patient contact and reports on KPIs

Transitioning to self-management

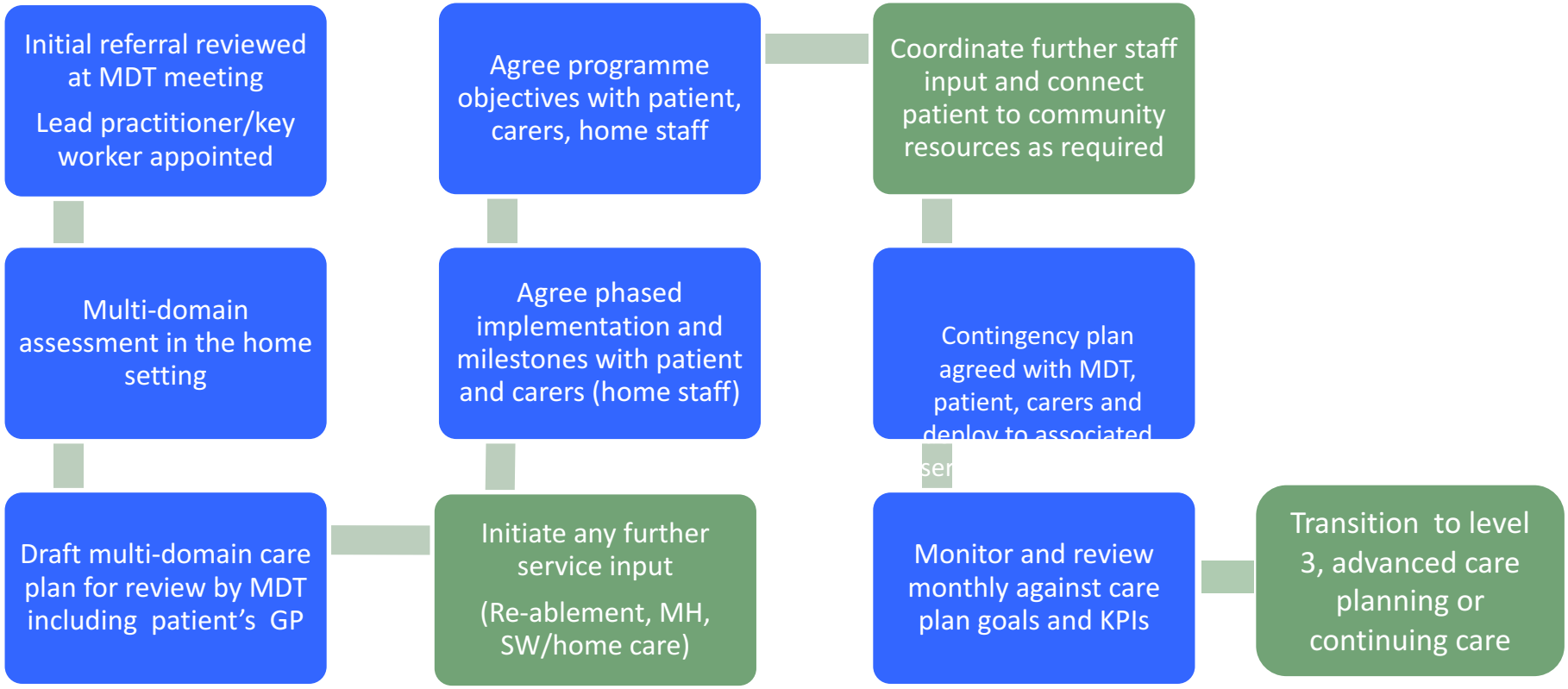
In the red phase, (weeks 1 – 4) patients are identified and assessed with the GP fully involved. They are engaged in a partnership approach via face-to-face assessment.

In the amber phase, (weeks 5-8) the patient and practitioner sets the objectives and the joint holistic care plan and patient education programme is developed. Multi-disciplinary team input is involved as required. The plan is then set into train.

In the green phase (weeks 9-13) the patient has become largely self-managing, supported where necessary by mainstream primary and social care and/or community resources Measureable clinical and utilisation parameters are under control and the patient can be discharged into with periodic monitoring.

3. 3 management pathway for level 4 patients

(detailed pathway is condition specific)



3. 4 Service engagement periods and on-going referral

Patient profile	Expected period of engagement	Referral to on-going care
Level 4	Up to *12* months Review every 3 months	If patient improves significantly refer to level 3. If no progression, refer to continuing care or initiate advanced care planning
Level 3	Average of 12 weeks Maximum 6 months 3 monthly monitoring	Refer on to health coaching or primary care team including DNs. *If significant deterioration* refer to level 4 service
Level 2	Remain engaged medium-term 3 monthly review	If adherence declines and complexity ensues refer to level 3 service If progression halted and adherence improves refer to level 1
PATIENT ENGAGEMENT IS HOME-BASED INCLUDING RESIDENTIAL HOMES (where staff are carers)		

The *core* workforce will comprise registered practitioners and medial assistants all assessed as competent in their respective roles to manage the client groups. These staff will work to evidence-based care pathways and practice manuals which along with the competence frameworks will be agreed with/accredited by the MCP. Other specialist roles will provide sessional input to the team overall. (see section 4)

Patients with long-term conditions can both improve (the principle intention of the service), remain stable (the minimum aim) or further progress. They thus move up and down the needs profile triangle. They should therefore be subject to regular review with a view to referring to more appropriate care as required. The primary aim should be to move patients down the continuum on care to a less intensive intervention. To illustrate this, Level 1 and 2 patients who remain stable may remain in the service for the medium term; if level 2 patients improve they can managed at level 1 within primary care Patients with multi-morbidity at level 4 who may improve will benefit from a level 3 intervention to progress to greater self-management. Others who make no progression and or decline should be referred on to a continuing care service or advanced care planning if in the last 12 months of life.

Specific services offered to residents of nursing and residential care homes: Targeting nursing home and residential care population (e.g. frail elderly, young people with physical disabilities), Specific MCP practitioners allocated to particular homes, working in collaboration with the partners to provide care coordination and case management to all residents. Nursing home case managers allocated to set care homes. Also supports admission avoidance by early identification of an exacerbation of an illness allowing for early and proactive treatment by MCP staff and strengthening the resilience of home-staff in clinical management capacity of less severe cases without need for referral. Includes step-up programmes to match patients to the right clinical resource and settings.

4. 1 Core workforce roles – indicative job contents

Complex Care coordinator – Registered practitioner t qualified staff with core skills ctrained and mentored to competence in 6 months

- Risk adjustment and stratification modelling
- Assessment and care planning
- Patient self-management coaching; education and counselling;
- Medication management (minimum);
- Motivational interviewing and managing people telephonically,
- Health coaching and monitoring
- Working in multi-disciplinary environment;
- Care transition planning; contingency/disease trajectory planning
- Management of patient pathways
- Coordination of additional health, social and 3rd sector l services.
- Clinical supervision of medical assistants
- Coordinates with staff and Nursing Homes on patient management
- Participate in clinical audit and outcomes reporting
- Disease management modules
- Non-medical prescribing

Practitioners should abide by the NMC Code of Conduct, and it clearly states that they "put the interests of people using or needing nursing services first' and the Coalition for Collaborative Care NHS England 2015"

Independently assessed as competent in above
Grade as Agenda for Change grade 7

Medical assistant (MA) job content – locally designed and trained in-service to competence framework over 18 months

Position Summary

The medical assistant is responsible for a variety of case management duties working ***under the direction of the registered staff***. The medical assistant is responsible for utilizing Nursing Process to ensure that quality care is provided to adult patients with chronic conditions and complex needs.

Qualifications upon entry

Current NVQ 2/3 certification
Previous experience as primary care HCA preferred

Essential Functions of the Job

- Customer service
- Manage Referrals
- Manage Recall Lists
- Provide health teaching, advocacy, counselling and assistance to a group or population of patients defined as at High Risk for Admission or Re-Admission and support what is in best interest of patient or group
- Engage with and managing patients on the telephone or in the home
- Monitor and coordinate chronic disease management and supports patient monitoring procedures
- Maintains a register of 3rd sector services
- Document virtual visits
- Records and collates outcomes KPIs

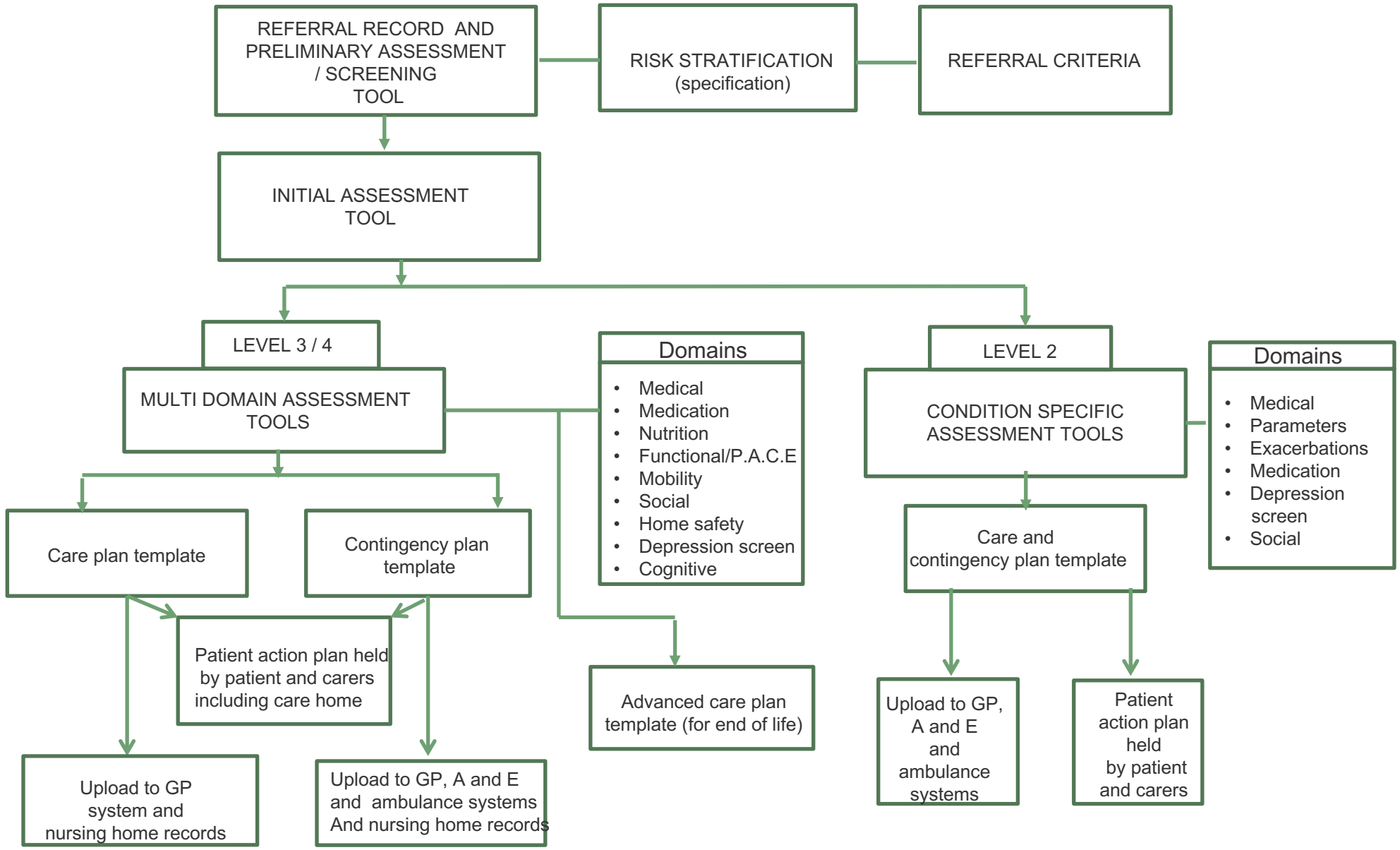
Knowledge and skills

- Understands clinical parameters of specific conditions
- Engagement and motivational skills;
- Risk adjustment and stratification modelling
- Understanding the various referring agencies;
- Risk management including understanding boundaries re practitioners
- Working in multi-disciplinary environment

Independently assessed as competent in above: Agenda for Change grade 4

All staff will work to the agreed patient flow processes and pathways for each level of care and the associated practice manuals and patient documentation. These will be agreed with / accredited locally. The competence frameworks for staff which complement these documents will be agreed with / accredited locally. The MA function includes activities already performed within the NHS by HCAs in primary and community care including support workers in Continuing Health Care .

4.2 Decision support tools



The Group Health Experience - The journey to Comprehensive Primary Care through Whole Population Management (Sources Dr Rob Reid and Prof Ed Wagner)

Background

- Largely urban population of 500,000 (Seattle) with established primary care system dating back to the 1940s.
- Co-operative whole service health plan and delivery owned by the members
- Home of the chronic care model developed by Ed Wagner who works there
- One of only 7 health care systems in the US that qualifies for 5 stars rating by the US DoH in older people's care (over 65s) and qualifies for maximum quality bonus payments under Medicare scheme
- Yet one of the lowest utilisers of reactive hospital care in the US *at the beginning of the initiative*
- Mid 2000s facing a problem with recruitment and low morale in the primary care centres - hubs of 10,000 population on average – particularly burn-out amongst doctors which was exacerbating recruitment and retention challenges

Redesign

Launched the Primary Care Medical Home pilot in one 10,000 population hub in 2006

- Create multi-disciplinary teams
- Introduce care coordination
- Focus on whole population management – individualized, holistic care programmes
- Focus on patient empowerment, co-production, motivational work
- Change the team structure bringing in pharmacists, paramedics and new medical assistant function
- Introduce more remote working with patients on telephone and email
- Medical assistants (MAs) become the 'work-horses' of the practice supporting
- General medical services in an extended 'primary care HCA type role'
- Care coordination, health coaching of less complex needs patients
- Supporting the registered practitioners managing the more complex needs
- Supporting additional clinical audit requirements through data management and reporting

Results today

- Cost effective as further savings on hospital costs pay for pilot
- GP morale addressed and burn-out reduced – now function as clinical team leaders, see fewer but more challenging patients
- Quality and patient satisfaction increased
- Major change in the workforce is in the medical assistant role (MA) which becomes the 'workhorse' of the systems. Registered nurses have lists and manage most complex patients. MAs do the routine GMS work and manage level 2 patients
- MAs ialso the least expensive staff member and quick to develop as requiring only 2 years in service training to bring up to full competence
- *Rolled out to whole system by 2013 now redefined as the Comprehensive Primary Care incorporating whole population management. Best practice innovation and core to the successful accountable care models*

http://content.healthaffairs.org/content/29/5/835.full. http://www.ehcca.com/presentations/medhomesummit3/reid_1.pdf
http://www.annfammed.org/content/12/2/142.full https://www.ahrq.gov/sites/default/files/wysiwyg/professionals/systems/primary-care/workforce-financing/white_paper.pdf

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