Population Health

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The Quadruple Aim

1. Improving the individual outcomes & experience of care
2. Reducing the per capita cost of care
3. Improving the health of the population
4. Improving the experience of *providing* care

Sikka et al (2015)BMJ Quality and Safety
http://qualitysafety.bmj.com/content/early/2015/06/02/bmjqs-2015-004160.full

NHS Definition of Population Health

...is an approach aimed at **improving the health of an entire population**

It is about improving the physical and mental health outcomes and wellbeing of people, whilst reducing health inequalities within and across a defined population

It includes action to reduce the occurrence of ill-health, including addressing wider determinants of health, and requires working with communities and partner agencies

Focusing on people

- Understanding needs
- Understanding value
- Working with communities

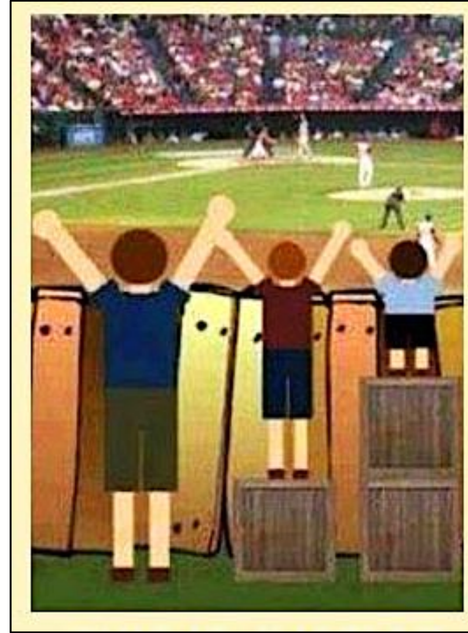
Coordinating individual care

- Integrating care pathways
- Understanding risk
- Identifying gaps and overlaps
- Citizens as experts

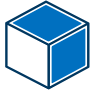
Dynamic management of the whole system
• System redesign
• Financial reform & incentives
• Workforce redesign
• Governance and accountability

Uniformity

Equality



There are 3 core capabilities for Population Health Management



Infrastructure

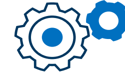
What are the basic building blocks that must be in place?

- **Organisational Factors -** defined population, shared leadership & decision making structure
- **Digitalised care providers and common longitudinal patient record**
- **Integrated data architecture** and single version of the truth
- **Information Governance** that ensures data is shared safely, securely and legally

Intelligence

Opportunities to improve care quality, efficiency and equity

- **Supporting capabilities** such as advanced analytical tools and software and system wide multi-disciplinary analytical teams, supplemented by specialist skills
- **Analyses** - to understand health and wellbeing needs of the population, opportunities to improve care, and manage risk
- **Reporting** the performance of the ICS as a whole in a range of different formats



Interventions

Care models focusing on proactive interventions to prevent illness, reduce the risk of hospitalisation and address inequalities

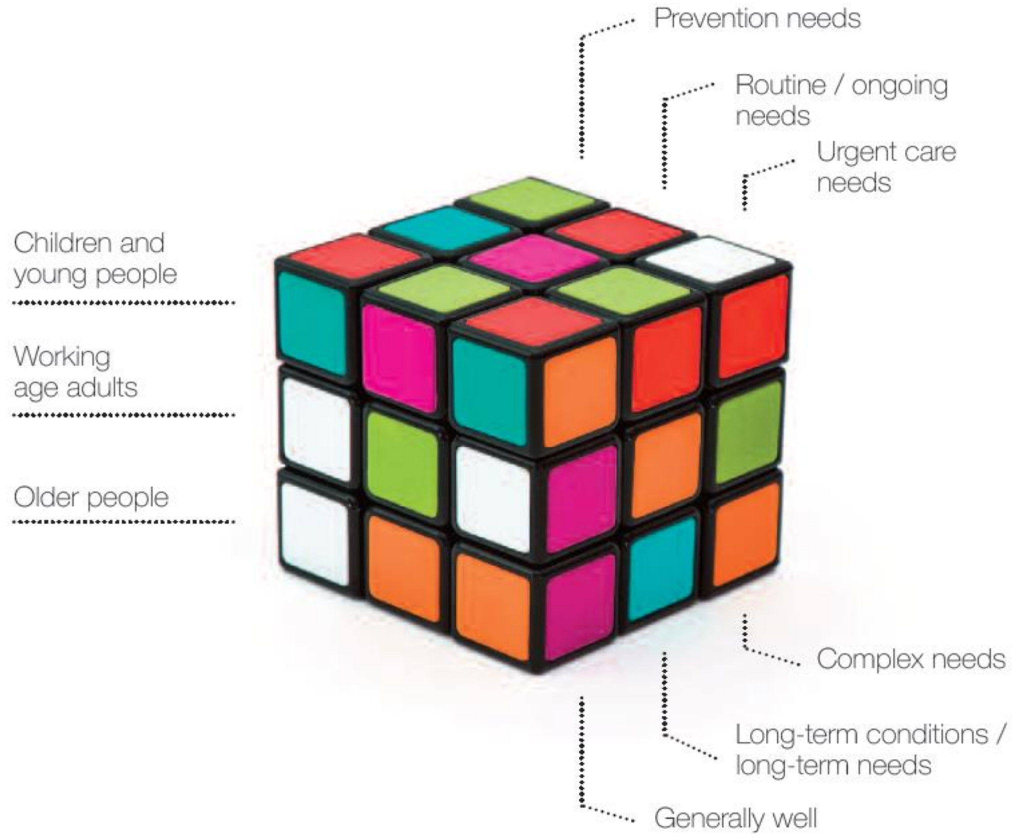
- **Care model design –** delivery of integrated personalised care tailored to patient groups
- **Community well-being approaches**, social prescribing and social value projects
- **Workforce development –** upskilling teams, realigning and creating new roles
- **Incentives alignment,** design, ROI modelling and risk sharing mechanisms

	Generally well/ good wellbeing	Long term condition(s)/ social needs	Complexity of LTC(s)/ social need and/or with disability
Children and young people			
Working age adults			
Older people			

Segmentation

	Generally well		Long term conditions / long term needs		Complexity of LTC(s) and/or disability	
	Low risk	High risk	Low risk	High risk	Low risk	High risk
Children and Young People						
Working Age Adults						
Older People						

05/09/2018 | Dr Steve Laitner and Dr Mark Davies, NAPC


Prevention needs
Routine / ongoing needs
Urgent care needs
Children and young people
Working age adults
Older people
Complex needs
Long-term conditions / long-term needs
Generally well

		Generally well		Long term conditions / Long term needs		Complexity of LTC(s) and/or disability	
		Low risk	High risk	Low risk	High risk	Low risk	High risk
Children and Young People	• Neonates • Infants • Toddlers • Children • Adolescents						
Working Age Adults	• Young • Middle aged • Older working age						
Older People	• 65-80 • 80-90 • 90+						

Risk stratification – golden rules

1. Its all about splitting the population up into bite sized pieces - dont use segmentation and risk strat interchangeably.

2. If using risk strat it should be for a specific event - ie not just risk of admission - could be risk of fall , risk of chest infection , risk of non compliance

3. Need to think about impactability - if i identify these folks can i do anything about it

4. Be clear about ROI and measure it

5. Evaluation is key to understanding what you are doing and taking statistical advice to avoid

6. Ask yourself if what you are doing is OK from an IG perspective , ethic perspective and health inequality point of view

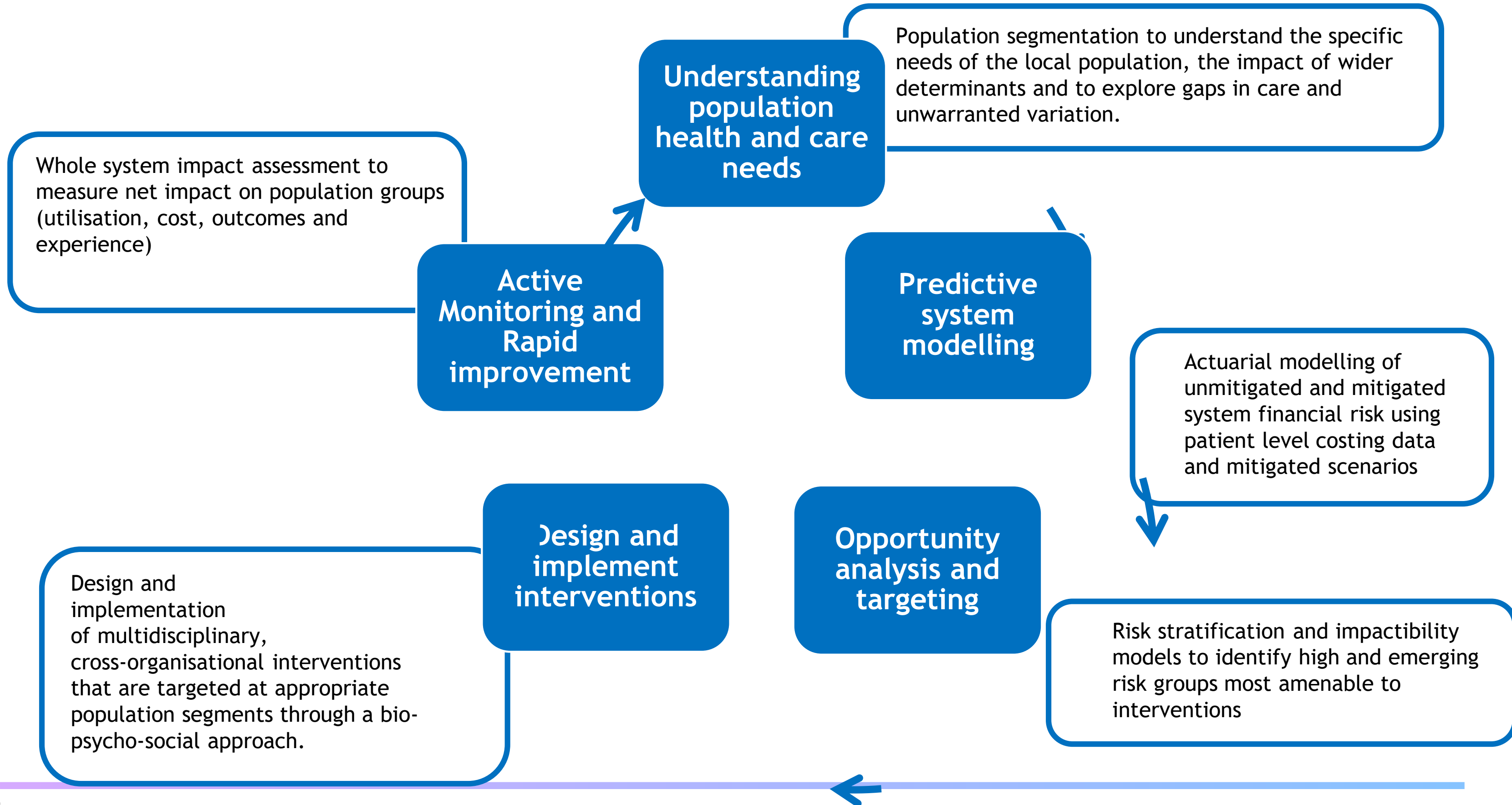
7. Any supplier you work with need to show how they can create a linked data set , do the analysis and feed an identifiable cohort back to a provider

8. Flexibility is key - so a supplier need to be able to create groups that you define according to local factors and priorities - off the shelf algorithms don't work

9. Match the timeliness of the data feeds to the exam question - ie may be weekly for falls prevention , 4 times a day for care coordination

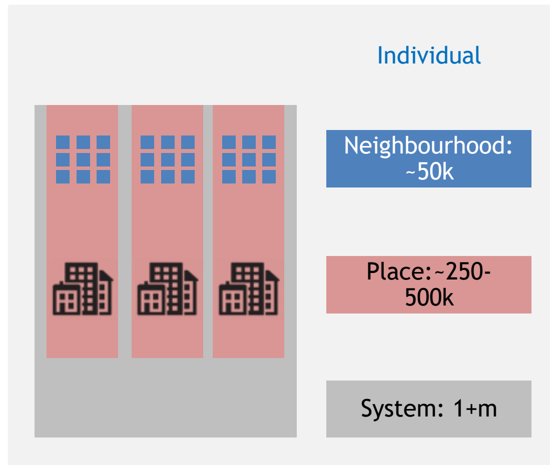
10. Involve staff is at the beginning - rather then giving them an answer and telling them to define a resulting service - ie defining the questions , designing the data flows and exposure to analytics in a agile methodology

A practical and measurable journey of intelligence-led improvement



Population Health Management by geography

The principles of PHM across different geographical tiers within a system should be the same but the purpose and process will differ to be relevant and appropriate to the different population groupings.



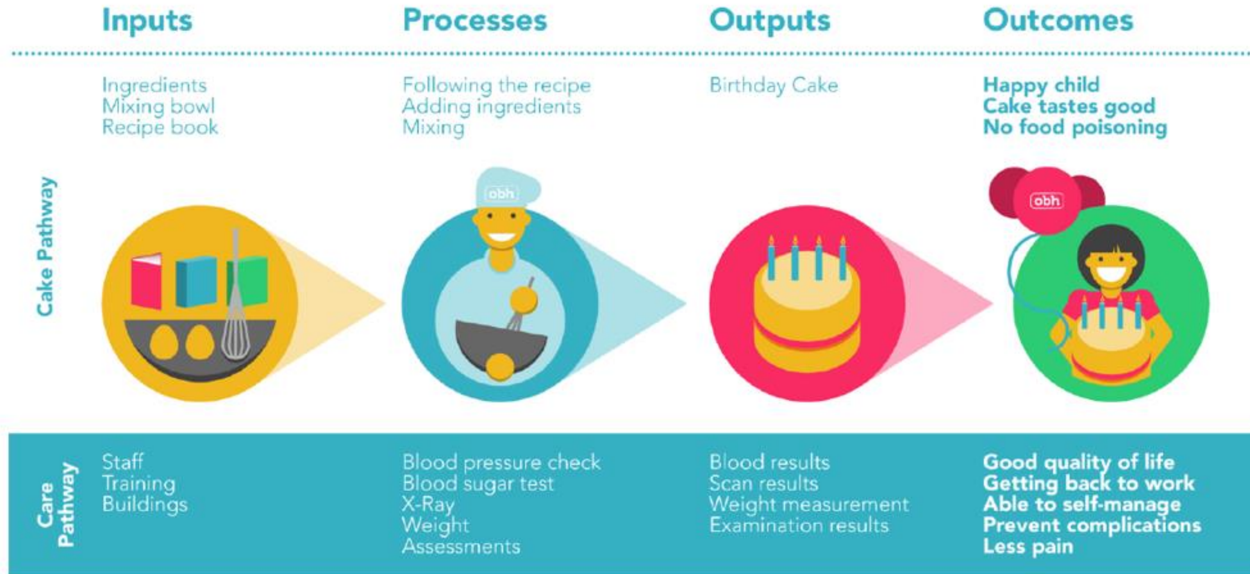
At the system level PHM techniques can inform strategic planning of large scale prevention or tertiary services;

At the place level PHM techniques should inform integrated care design,

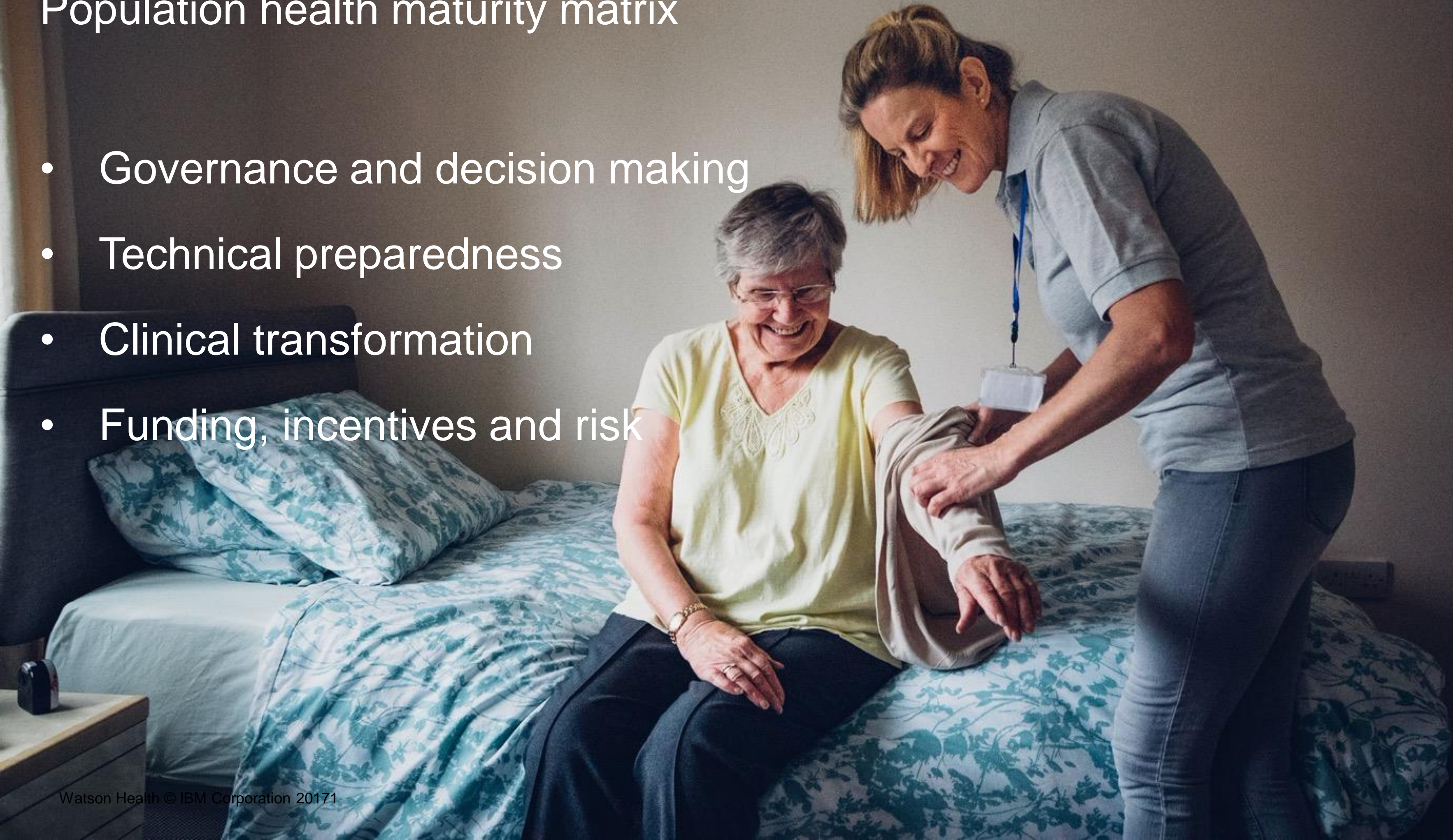
At the neighbourhood level care pathways and interventions can be considered;

At the individual level PHM can be used to help personalise care according to need.

Outcomes



Population health maturity matrix



- Governance and decision making
- Technical preparedness
- Clinical transformation
- Funding, incentives and risk

Population Health Approach

Auxiliary Resources

Specialist Providers

- Information Silo

Nada
Pop Health Admin

- Utilize resources to mitigate at risk patients

Hamad
The Patient

Noora
Nurse

- Focused on seeing patients in clinic, not time for follow up

Dr. Najjar
Primary Care

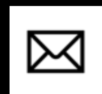
- Waiting for Patient to engage in care

Aisha
Care Coordinator

- Manages patients across care continuum

Let's INVENT the Future …

@markpricedavies



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" I am interested in the future because it is where I'm going to spend the rest of my life"

Woody Allen