Improvement Science – a key skill for pharmacists in the 21st century?

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Why improvement science?

- We have two roles in healthcare
  - To do the job we have and
  - To improve it

- Maureen Bisognano – Former Institute of Healthcare Improvement President and CEO, USA. Nurse
- Donald Berwick – President emeritus and Senior Fellow, IHI, USA Paediatrician
- Sir Muir Grey, - Public Health Consultant, Oxford University Hospital, NHS. Professor, Primary Care Health Sciences, Oxford University
Deming’s System of Profound Knowledge

- Appreciation for a system
- Human side of change
- Building knowledge
- Understanding variation
The model for improvement

- What are we trying to accomplish?
- How will we know that a change is an improvement?
- What changes can we make that will result in improvement?
- Small scale test cycles - PDSA
What was the problem?

- Hutt Union & Community Health Service had 578 patients with diabetes.
- Almost 50% of patients have an HbA1c greater than 64mmol/mol, which indicates poor glycaemic control.
- Our aim is to reduce the average HbA1c by 10% in HUCHS patients with diabetes by 31 December 2017.
- What was our theory of change?
HUCHS Diabetes Improvement Project

AIM
To reduce the average HbA1c by 10% in HUCHS patients with diabetes by 31 December 2017

PRIMARY DRIVERS
- Effective diabetes management processes
- Barriers to access
  - Clear pathways for patients with diabetes
  - Individualised patient management plans
  - Improved integration between providers
  - Reduce financial barriers
- Patient empowerment
  - Provide culturally appropriate services
  - Clinic access
  - Patient knowledge
  - Patient engagement
  - Community & Whanau partnerships

SECONDARY DRIVERS
- Change Ideas
  - Provide regular data and feedback to providers
  - Have a clear pathway for new and existing patients with diabetes
  - Individualise patient care plans
  - Standardise prescribing of diabetes medication
  - Review patients on pioglitazone after 6 months with no significant reduction in HbA1c
  - Map external and internal diabetes services and agree referral and feedback processes
  - Better connection with local community pharmacies
  - Check eligibility for disability allowances and for clinic visits and medications
  - Increase staff knowledge and awareness of cultural issues
  - Offer extended clinic hours
  - Transport plans for patients as needed
  - Develop education sessions and programmes based on patient feedback - Pt Experience Survey
  - Print out HbA1c chart for each patient
  - Implement Manage My Health patient portal
  - Patient, whanau and community feedback and co-design
  - Sharing patient stories
  - HUCHS Facebook page
  - Patient info sheeting
  - Diabetes Blood Glucose Monitoring Software
  - Exercise Programme
  - "Sticky Blood" Letter
Measures Dashboard

- Average HbA1c
- Average HbA1c – Cohort 1
- Percentage with HbA1c ≤ 64
- Patients completed DAR
- Third next available dr appt
- Third next available nurse appt
Average HbA1c Cohort 1
Percentage of patients with HbA1c ≤64mmol/mol
Co-designing services with patients
What skills are needed for the future?

- Improvement science offers the opportunity to practice and acquire these future skills
- Application for future pharmacists
  - Leadership - build improvement capability
  - Partnership – clinician and individuals
  - Patient safety – medication safety
  - Innovators and system thinkers - disruptors, transformational change
  - Equity, diversity and inclusion - value based care

Top 10 skills

<table>
<thead>
<tr>
<th>2020</th>
<th>2015</th>
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<tbody>
<tr>
<td>1. Complex Problem Solving</td>
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<td>2. Critical Thinking</td>
<td>2. Coordinating with Others</td>
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<td>3. Creativity</td>
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<td>5. Coordinating with Others</td>
<td>5. Negotiation</td>
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<td>6. Emotional Intelligence</td>
<td>6. Quality Control</td>
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<tr>
<td>7. Judgment and Decision Making</td>
<td>7. Service Orientation</td>
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Source: Future of Jobs Report, World Economic Forum
future medical innovations
https://www.elsevier.com/connect/4-medical-innovations-to-watch-for-in-the-next-100-years