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INFORMATION SUPPORT AND EVALUATION PLANS

(A) POLYPHARMACY RISK REDUCTION EVALUATION FINDINGS

(B) CCC INITIATIVE INFORMATION SUPPORT PLAN & EVALUATION PLAN

APRIL 29, 2019

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What are we going to discuss?

- Polypharmacy Risk Reduction Initiative
  - Over April 2015 to July 2018
  - Evaluation spanned this period and completed Oct 2018
  - Final Reports and Results to Shared Care March 2019
- Coordinating Complex Care for Older Adults Initiative
  - Plans just completed
    - Information Support Plan
    - Evaluation Plan

PPhRR Initiative

Source: Chris Rauscher MD PPhRR Initiative

PPhRR Initiative – The AIM

To **reduce risks of polypharmacy in the elderly**, by providing physicians with **practical approaches and tools**.

"Generally physicians know that there are issues with medications in the elderly but need a practical way forward"

Source: Chris Rauscher MD PPhRR Initiative

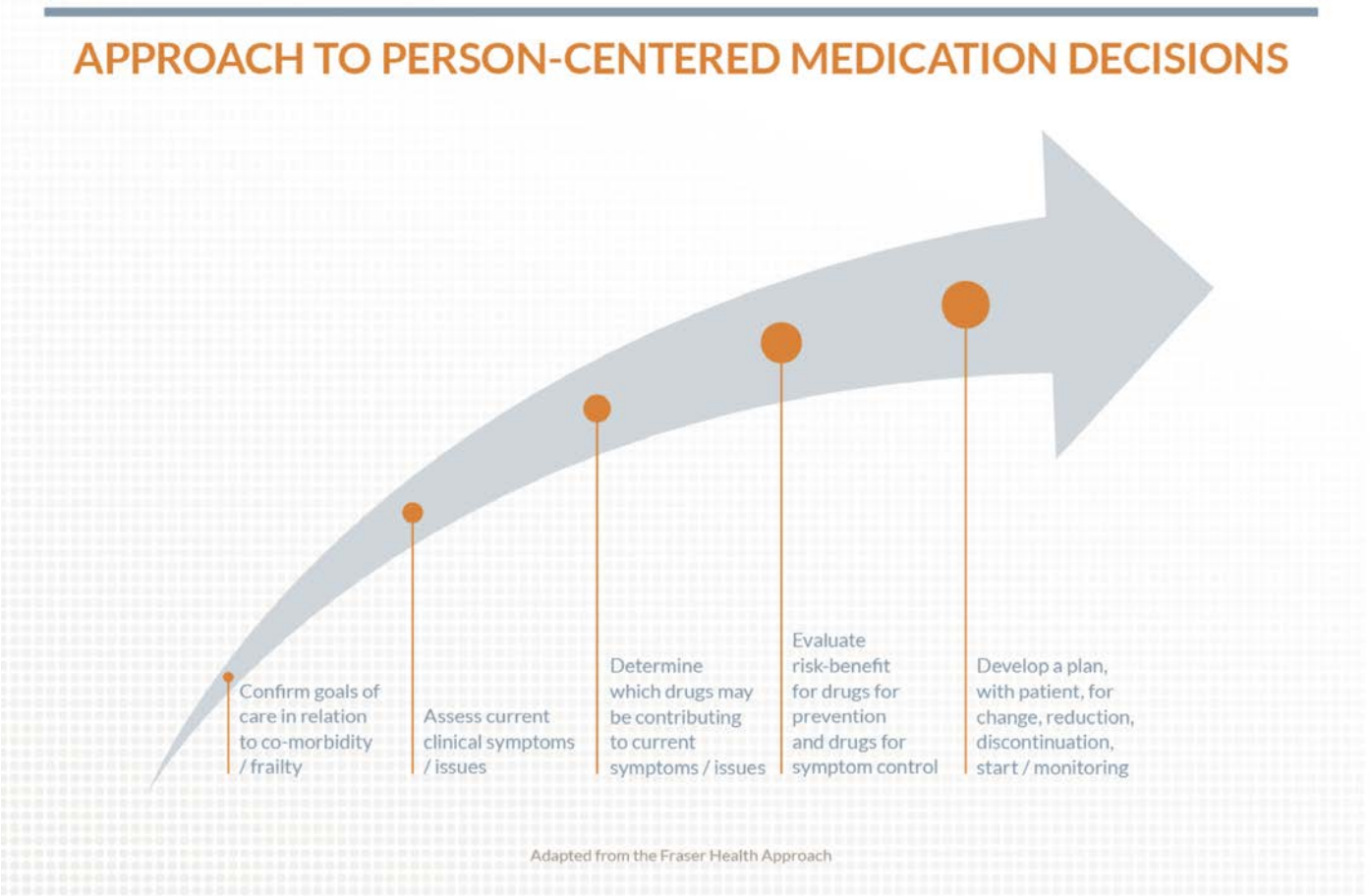
What is Polypharmacy?

PPhRR Initiative working definition

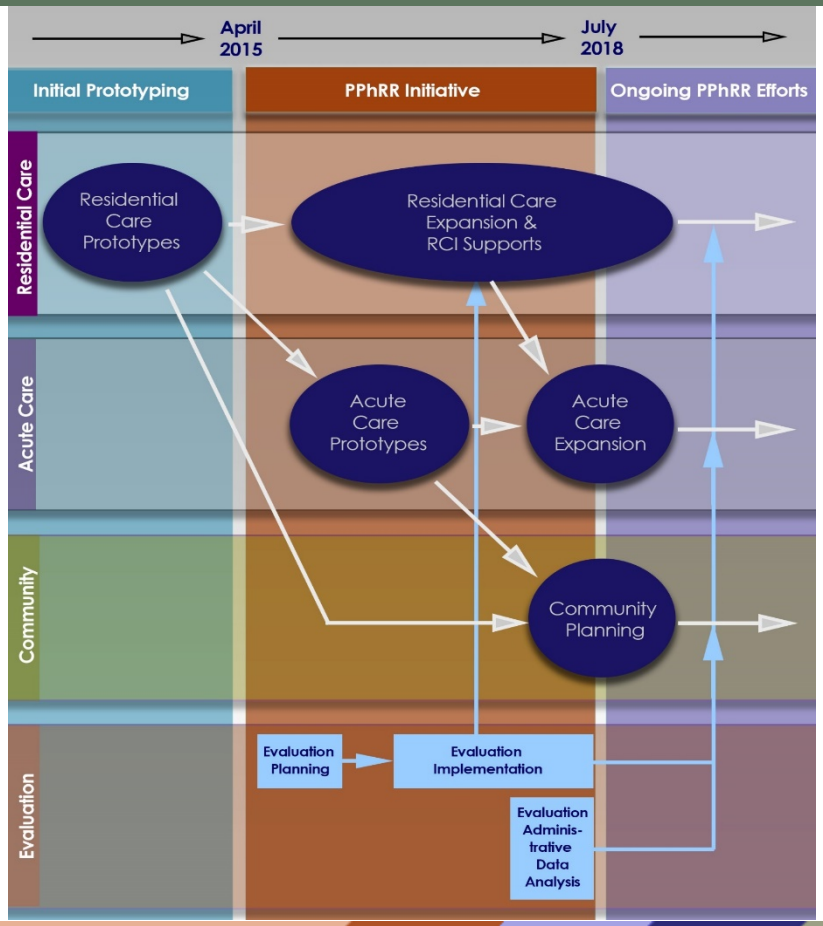
When the **theoretical benefits of multiple medications are outweighed by the negative effect of the sheer number of medications,** regardless of class of medication or “appropriateness” thereof.

Source: Chris Rauscher MD PPhRR Initiative

Approach to Medication Decisions



PPhRR Initiative & Evaluation



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PPhRR EVALUATION

PPHRR SUMMARY EVALUATION REPORT AND ADMINISTRATIVE DATA ANALYSES
SHARED CARE COMMITTEE - MARCH 12, 2019

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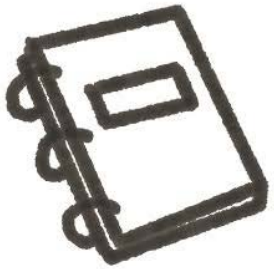
PPhRR Summary Evaluation Report Final



Evaluation and admin data reports and deliverables

Health services data - request	Formal health services data request submitted to MOH, can be used for future requests
Health services data - report	Baseline analyses 2010/11 to 2016/17 to support future PPhRR planning and evaluation
Health services data - patient vignettes	25 patient stories based on data show interactions with physicians & medication use
PPhRR intervention literature review report	Includes more detail on PPhRR approaches and outcomes in the literature by setting and study
Detailed eval report	Details evaluation findings across all data sources except the health services data analysis
Summary eval report	Summarizes key findings from all data sources

Summary report purpose

Describe Initiative and its evaluation	♦ Initiative purpose ♦ Initiative implementation ♦ Evaluation approach
Include all evaluation data sources	♦ Background literature review ♦ Document review ♦ Interview findings ♦ Health services data analysis 2010/11 to 2016/17
Distill key findings	♦ What worked well, challenges, lessons learned ♦ Suggestions for future PPhRR efforts ♦ Early outcomes for providers & patients/residents

Residential care leader interviews

Summary report highlighted key interview findings such as:

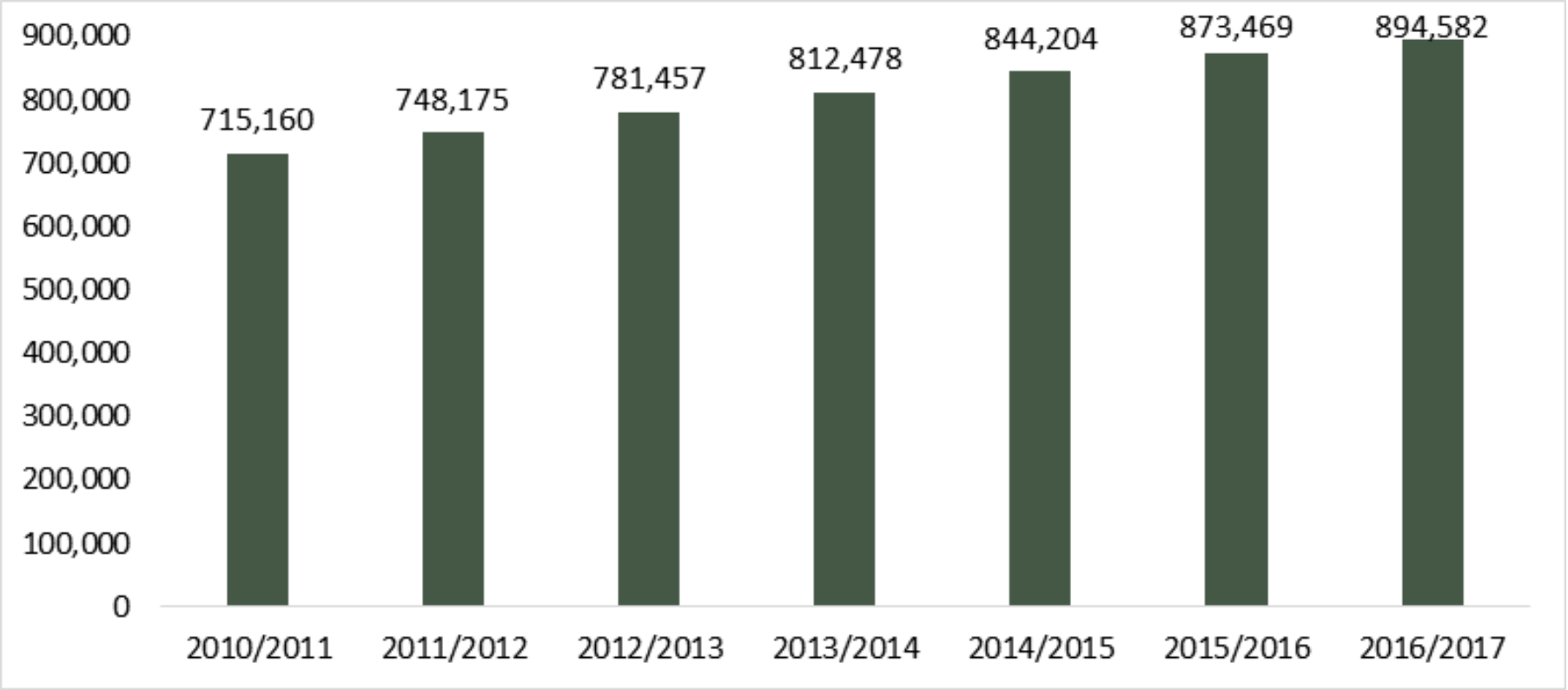
PPhRR observational outcomes in residential care reported by physician interviewees	♦ Improved resident cognition, alertness, and quality of life ♦ Less time spent by nurses administering medications ♦ Satisfaction of family members and administrators

Acute care prototype interviews

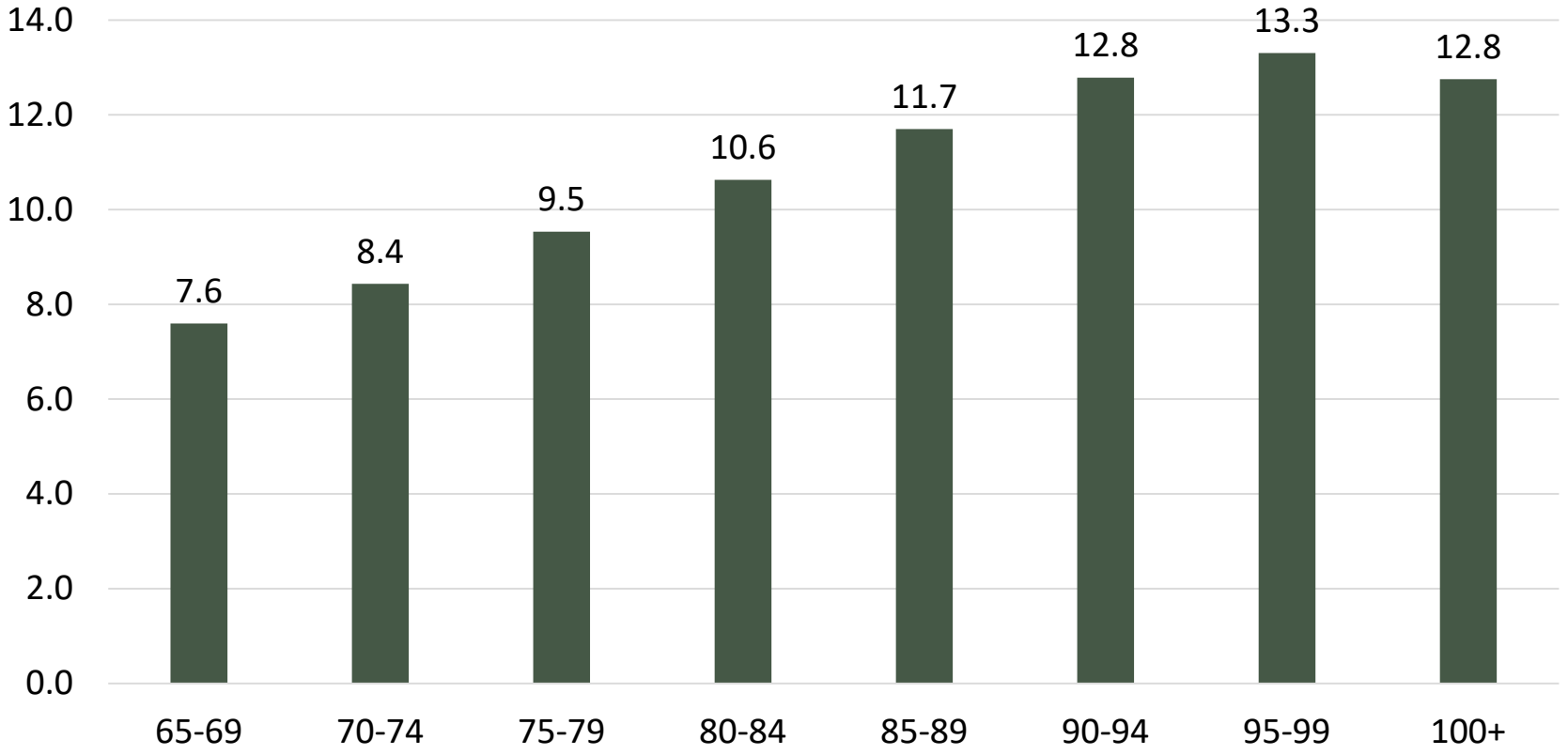
Summary report highlighted key interview findings such as:

What worked well in acute care	♦ Good relationship and/or communication between pharmacists, physicians, and in some cases, nurses ♦ Standardized med review forms documenting medication indications, medications to be changed, and the rationale for changes ♦ Agreement that PPhRR is a priority and good buy-in for PPhRR ♦ Physician and pharmacy champions/leadership ♦ Geriatrician and geriatric psychiatrist support

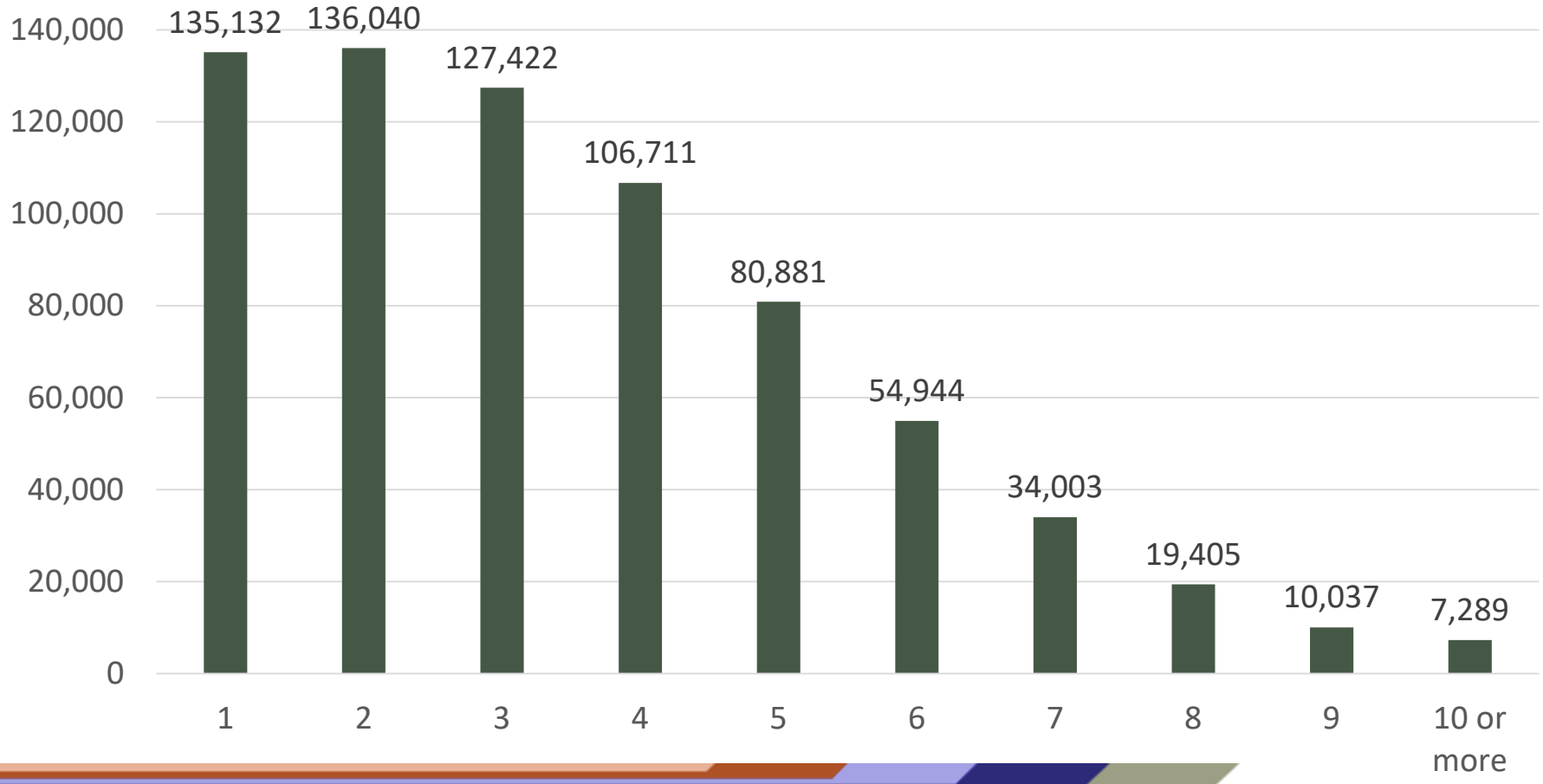
Number of persons age 65+ receiving MSP services over time



Number of medications by age category

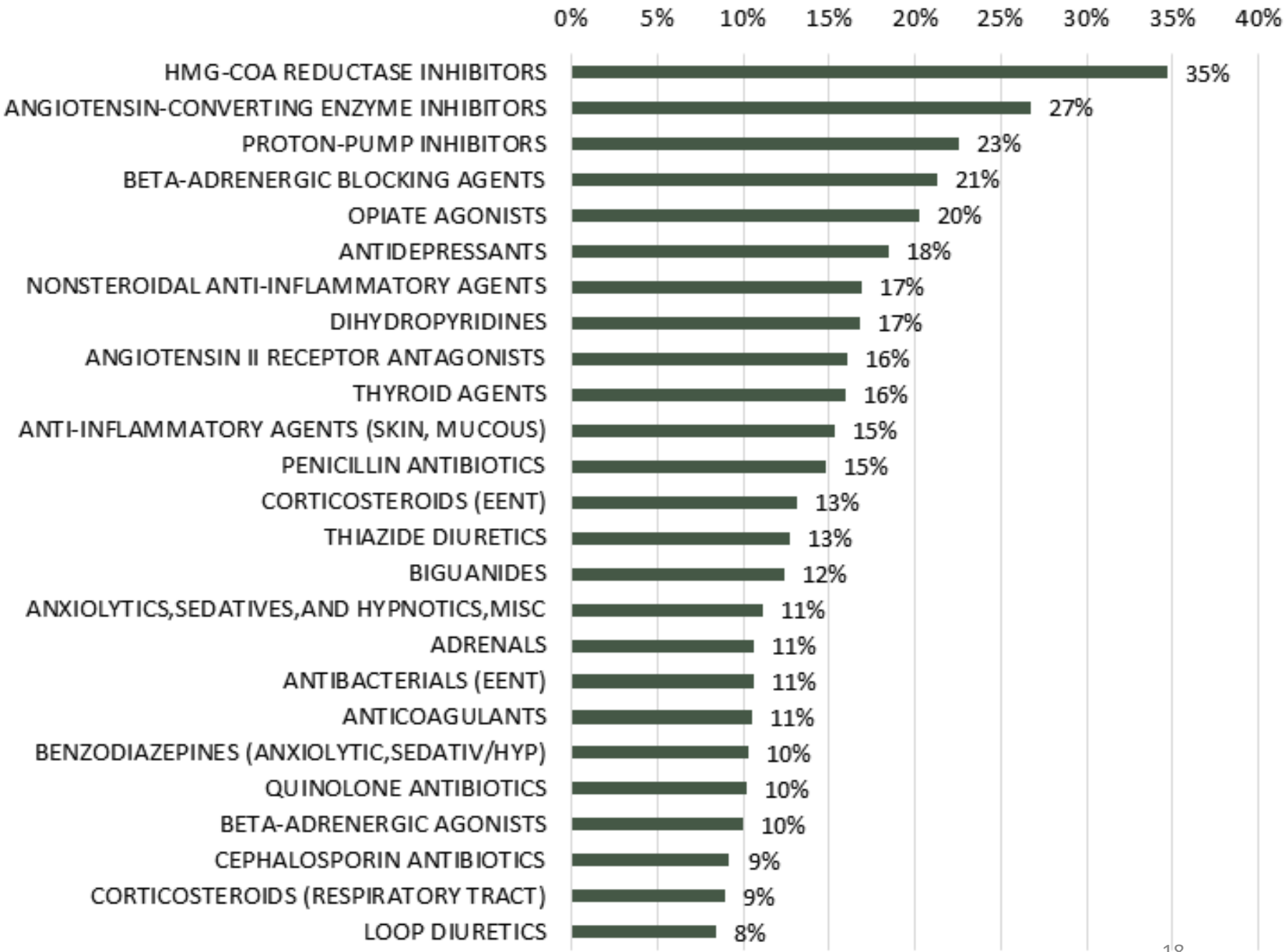


Number of persons with each # of AHFS3 top 18 drug classes (excl. antibiotics & topicals) in 1 year



% of persons age 65+ prescribed each of the top 25 AHFS3 drug classes in 1 yr

- See next slide


0%
5%
10%
15%
20%
25%
30%
35%
40%
HMG-COA REDUCTASE INHIBITORS 35%
ANGIOTENSIN-CONVERTING ENZYME INHIBITORS 27%
PROTON-PUMP INHIBITORS 23%
BETA-ADRENERGIC BLOCKING AGENTS 21%
OPIATE AGONISTS 20%
ANTIDEPRESSANTS 18%
NONSTEROIDAL ANTI-INFLAMMATORY AGENTS 17%
DIHYDROPYRIDINES 17%
ANGIOTENSIN II RECEPTOR ANTAGONISTS 16%
THYROID AGENTS 16%
ANTI-INFLAMMATORY AGENTS (SKIN, MUCOUS) 15%
PENICILLIN ANTIBIOTICS 15%
CORTICOSTEROIDS (EENT) 13%
THIAZIDE DIURETICS 13%
BIGUANIDES 12%
ANXIOLYTICS,SEDATIVES,AND HYPNOTICS,MISC 11%
ADRENALS 11%
ANTIBACTERIALS (EENT) 11%
ANTICOAGULANTS 11%
BENZODIAZEPINES (ANXIOLYTIC,SEDATIV/HYP) 10%
QUINOLONE ANTIBIOTICS 10%
BETA-ADRENERGIC AGONISTS 10%
CEPHALOSPORIN ANTIBIOTICS 9%
CORTICOSTEROIDS (RESPIRATORY TRACT) 9%
LOOP DIURETICS 8%

9 key lessons learned

- Broad extent of polypharmacy
- Need for integrating process change
- Importance of leadership support
- Importance of clinical team engagement, education, and awareness
- Tools are critical to support PPhRR
- Patient, resident, and family communication re: PPh harms
- Human resources to support implementation
- Data and information to support implementation
- Working with other projects and initiatives

Key opportunities for future PPhRR

- Leadership engagement, awareness, and support
- Physician and other health provider engagement, awareness, and education
- Patient, resident, family, and public awareness and education
- Tools, supports, and resources
- Embedding PPhRR in processes and practice
- Data for planning, communication, understanding clinical practice, and evaluation

For each opportunity:

Leadership engagement, awareness, and support	
Evaluation findings	Evaluation interviewees and Acute Care Collaboration Day participants identified the need for leadership engagement, endorsement, and support (hospitals, residential care facilities, Divisions of Family Practice, health authorities, and the Ministry); to build that leadership support by presenting a case based on evidence; and to identify PPhRR champions in leadership positions.
Intended outcomes	Leadership in relevant organizations become aware of the broad scope and negative impacts of polypharmacy in persons age 65 and older and the benefits of polypharmacy risk reduction, and as a result support PPhRR within their area of responsibility.
Opportunities	Use the PPhRR Initiative and its evaluation results to inform health system leadership about the scope of polypharmacy, what approaches work in BC, and opportunities for future PPhRR efforts.

PPhRR Health Services Data and Analyses

Accomplishments & Challenges

- Developed a repeatable process:
  - Formally defined 65+ cross-sector health service longitudinal data requirements
  - Established processes between Drs of BC and MOH for data access and use
  - Tested dataset completeness and relevance for PPhRR use
  - Questions and analyses completed can support multiple initiatives
- Completed baseline analyses, vizualization and interpretation:
  - Aggregate and detailed longitudinal person and physician specific
  - Patient and drugs filled clusters, patterns, relationship to physicians
- Challenges
  - Data late in the PPhRR initiative cycle – active use during PPhRR limited
  - Results showed the scale of polypharmacy in people 65+ in BC is very large - larger than PPhRR Initiative reach

Question/Analyses Examples

- Aggregate Counts
- Patient complexity of service use groups
- Patient-GP-Specialist groups/bundles
- Drug specific groups/bundles
- Patient specific vignettes – 7 year detailed health service use story
- Data visualization approaches

Basic Counts – FY 2016/17

How many people 65+ had Dr service	849,785
How many physicians	16,637
How many physician claims	40,358,765
Physician minus lab claims =	20,333,087
How many lab tests (90000+)	20,025,678
How many drug fills	37,049,583
How many hospital days	1,980,710
How many amb. care trips	395,296
How many RAI HC assessments	10,557
How many RAI CC assessments	101,563

Source: PPhRR Initiative Evaluation (2018)

Patients and Physician Service Use – Simple to Complex

- Complexity groups determined based on physician service/visits counts over 7 years (excluding lab)

#Visits over 7 years 2010/11 – 2016/17	CX	Cumltv % of people	#people	# Claims over 7 years	% of Claims
1 – 185	1	75%	581,721	56,675,540	50%
185-275	2	90%	119,485	26,707,055	24%
275-395	3	97%	53,277	17,219,428	15%
395+	4	100%	23,455	12,303,649	11%
		Total	777,938	112,905,672	100%
	0		278,624		

Source: PPhRR Initiative Evaluation (2018)

People 65+, GPs and Specialties

- 168,751 people 65+ received services from a GP plus three or more other physician specialties in 2016/17
- These seniors saw 39,470 different combinations of a GP plus three or more specialists in 2016/17
- The specialties that are seen most frequently include:
  - Internal Medicine (97,480 seniors)
  - Cardiology (92,519 seniors)
  - General Surgery (46,133 seniors)
  - Urology (40,085 seniors)
  - Orthopaedics (35,594 seniors)

Source: PPhRR Initiative Evaluation (2018)

Drug Groups/Bundles Sample

Top 30 Bundles Containing a Category ID		
ID: 1	**HMG-COA REDUCTASE INHIBITORS/**	
ID	**Bundle**	**Number Patients**
1	HMG-COA REDUCTASE INHIBITORS/	15,171
3	HMG-COA REDUCTASE INHIBITORS/ANGIOTENSIN-CONVERTING ENZYME INHIBITORS/	8,319
257	HMG-COA REDUCTASE INHIBITORS/ANGIOTENSIN II RECEPTOR ANTAGONISTS/	4,725
11	HMG-COA REDUCTASE INHIBITORS/ANGIOTENSIN-CONVERTING ENZYME INHIBITORS/BETA-ADRENERGIC BLOCKING AGENTS/	4,227
2051	HMG-COA REDUCTASE INHIBITORS/ANGIOTENSIN-CONVERTING ENZYME INHIBITORS/BIGUANIDES/	3,876
2049	HMG-COA REDUCTASE INHIBITORS/BIGUANIDES/	2,871
5	HMG-COA REDUCTASE INHIBITORS/PROTON-PUMP INHIBITORS/	2,794
513	HMG-COA REDUCTASE INHIBITORS/THYROID AGENTS/	2,703
9	HMG-COA REDUCTASE INHIBITORS/BETA-ADRENERGIC BLOCKING AGENTS/	2,483

Drug Groups/Bundles Sample

Bundle- HMG-COA Reductase Inhibitors (Statins)

There were 294,380 people taking Statins

Some people take a single drug. Other people were taking these drugs as one of a group of drugs.

- 15,171 people were taking only Statins
- 279,209 were taking Statins along with other drugs
  - For example, 8,319 people were taking Statins and Angiotensin Converting Enzyme Inhibitors
- There were 29,993 Bundles (unique combinations of drugs) containing Statins

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GRAHAM'S HEALTH SERVICE STORY

SAMPLE - THE POWER OF LINKED MULTI-SERVICE DATA

APRIL 2018

VIGNETTE 100222109 - PLX 4

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Moving forward

- Take advantage of repeatable processes:
  - Formally defined data requirements
  - Established processes between Drs of BC and MOH for data access
- Baseline content and analyses can be used as a starting point for future work
- The PPhRR approach is being transitioned into the Coordinating Complex Care - Older Adults Initiative

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COORDINATING COMPLEX CARE OLDER ADULTS INITIATIVE

INFORMATION SUPPORT PLAN, MARCH 25, 2019

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Information Support Plan Content

- Goals, Leadership, Considerations
- Work and Deliverables
- Stakeholders
- Stakeholder early description of information needs
- Dissemination to Users
- Description of Older Adults, Complex Care, Care Coordination
- Technical Data Requirements
- MOH Administrative Data Request

Information Support Plan Goals

To assist SCC and CCC Initiative stakeholders to:

- Develop a more in-depth understanding of coordinating complex care for older adults, how it currently exists, the characteristics of the patients, GP and specialist physician role within this, service flow and touch points, and other services and providers
- Develop tools and resources to support provincial and local understanding and actions to improve coordination of complex care for older adults
- Define and implement the approach to information support, education and information dissemination relevant to physicians and other stakeholders
- Conduct provincial and local project planning, monitoring and evaluation

Approach

- Acquire the data from MOH: Patient, MSP, PharmaNet, DAD, NACRS, HCC, RAI (Continuing Care and HCC) and Vital Stats
- Establish leaders and define questions
  - CCC Initiative Information Support Task Group
  - Define priority questions, assess clinical relevance, provide guidance on information/knowledge exchange
- Complete Analyses
  - Aggregate, longitudinal, patient and provider vignettes, complexity groups, cross service use, referral patterns etc.
- Support Knowledge Exchange
  - Interpret results, prepare info and disseminate

Timeframes

- Information Support April 1, 2019 to March 31, 2021
- Data Timeline:
  - Year 1: 2010/2011 – 2017/2018
  - Year 2: 2010/2011 – 2018/2019

Stakeholders

- CCC Project team and Working Group
- Physicians (GPs and Specialists) across the province
- Division physician leaders
- Division project managers and administrators
- Shared Care Committee

Stakeholder Early Questions

- Information required to understand coordinating complex care:
  - Hospital to Community Transition
  - Referral Patterns across health authorities and number of specialists seen
  - Patient Complexity
  - Polypharmacy
  - Inpatient versus Outpatient Consults
  - Patient Frailty Scores
  - Patients with multiple specialist consultations in the last year and cross-tab with frailty
  - Breakdown by demographics, age
  - Test tracking and follow-up
  - Hotspots for system stress/overuse
  - Identify higher risk patients

Stakeholder Dissemination

- Interviewees suggested:
  - Group Presentations
  - Graphics
  - Quarterly information
  - Practice Profiles – not reports with a bunch of numbers

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COORDINATING COMPLEX CARE OLDER ADULTS INITIATIVE

EVALUATION PLAN
MARCH 25, 2019

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Evaluation Plan - Content

- Initiative description
- Logic model and theory of change graphics
- Evaluation approach
- Detailed evaluation framework
  - questions, indicators, data sources, and timing

CCC Evaluation Objectives

- To use evaluation tools to assist initiative **planning** and implementation
- To document and assess initiative **implementation** and its context to identify:
  - What's working (including effective approaches and interventions)
  - Areas for improvement and spread at various levels
    - Initiative
    - Local group
    - Individual physician practice
- To evaluate **outcomes** of the initiative activities with each target group that can be expected to occur within the April 2019 - March 2021 time frame

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CCC Evaluation Approach

- **Participatory approach:** The initiative central team, local leaders, physicians, and other stakeholders will help guide the evaluation
- **Use a developmental approach:** The evaluation will be used to adapt to complex physician practice and implementation issues
- **Focus on utilization of evaluation results:** Involvement of local leaders, physicians, and others will ensure relevant issues are addressed
- **Balance local and initiative-level information needs**: The approach will need to support both local and initiative-wide evaluation requirements
- **Use a feasible approach and data sources**
- **Streamline information access:** Use online tools
- **Be applicable to evaluation of care coordination with other populations**

CCC Evaluation Scope

- Primary data collection such as interviews and/or surveys with initiative and local leaders, physicians, and other participants
- Supports (e.g., sample questions to consider) to local groups to conduct interviews and/or surveys of patients and family members
- Use of administrative data for aggregate evaluation reporting
- Evaluation reports, infographics, presentations, newsletter/website articles, and other communications

CCC Evaluation Timeframes

- Evaluation to be conducted in 2 and 1/3 years:
  - April 2018 - Initiative start
  - April 2019 - Evaluation start
  - March 2020 - End interim evaluation **data collection**
  - June 2020 - Interim evaluation **report** due
  - March 2021 - End final evaluation **data collection**
  - June 2021 - Final evaluation **report** due
- At the end of this time period, the need for further evaluation and/or performance monitoring will be assessed and recommendations made

CCC Sharing Evaluation Findings

Audience	Focus	Formal reports	Presentations	Infographics	Newsletter and website articles
Joint Collaborative Cmte co-chairs, Physician Services Cmte, Doctors of BC Board	Selected key findings: Initiative implementation and outcomes		X		
Shared Care Committee	All key findings: Initiative implementation and outcomes		X		
Initiative Working Group	Detailed findings	X	X		
Local leaders	Initiative- and practice-level implementation and early outcomes		X	X	???
Participating physicians	Practice-level implementation and early outcomes		X (where feasible)	X	X
Other participants & Stakeholders	Selected key findings			X	X

CCC Initiative Logic Model

- Provides a graphical overview of the Initiative:
  - Inputs (resources)
  - Activities
  - Target groups for those activities
  - Outputs (what is produced directly as a result of activities)
  - Short-term outcomes
    - Begin to occur during the time frame of the evaluation
  - Long-term outcomes
    - IHI modified Triple Aims
    - May take longer to occur
    - Also affected by other initiatives, projects, and factors

CCC Initiative Logic Model

- Three sets of activities (one per column) needed to achieve outcomes:
  - Initiative supports aimed toward local physician groups
  - Local physician group activities aimed toward participating physicians and other providers
  - Individual physician practice change aimed toward patients, families, and informal caregivers
- See PDF/Workshop Handout