

Development of Intervention-Related Quality Indicators for Renal Clinical Pharmacists Using a Modified Delphi Approach

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BACKGROUND

- Clinical pharmacists identify, prevent and resolve drug therapy problems (DTPs) to improve the quality of patient care
- Renal pharmacists have finite clinical capacity and must prioritize their direct patient care services to provide the greatest value to the patient and the health system

OBJECTIVE

- To develop consensus renal quality indicator–DTPs (renal QI-DTPs) in adult chronic kidney disease and end-stage renal disease patients that serve to advance renal pharmacist practice and improve quality of care

METHODS

Design

- 3-round, web-based, modified Delphi consensus survey

Setting, Sampling, Timeframe

- Representation of renal pharmacists across Canada
- Purposive sampling targeting 15-20 expert panelists
- Modified Delphi survey occurred January – April 2016

Expert Panel Inclusion Criteria

- Canadian pharmacists with post-entry to practice training
- ≥ 50% time spent providing direct patient care to adults with chronic kidney disease/end-stage renal disease
- ≥ 2 years experience

Renal QI-DTP Definition

- Cipolle/Strand DTP definition plus all of the following:
 - Involves prevalent and impactful condition
 - Intervention is supported by high quality evidence
 - Results in resolution of a DTP
 - Improves the quality of drug therapy

Candidate Renal QI-DTP Generation

- Renal clinical practice guidelines published ≤ 5 years
- Strong drug therapy recommendations
- Recommendations supported by high quality evidence
- Renal QI-DTP definition applied

Survey Instrument Development

- 30 candidate renal QI-DTPs
- 7 QI-DTP selection criteria
- 1 overall consensus criterion
- All criteria rated by each panelist on 9-point Likert scale
- Panelists could suggest candidate QI-DTPs in round-1

METHODS

Selection Criteria

- Medical condition prevalent and impactful in renal patients
- Drug is a high alert medication/involves complex regimen
- Drug therapy intervention is based on high quality evidence
- Drug therapy intervention affects clinically important outcome
- Drug therapy intervention will not negatively impact safety
- Direct link between QI-DTP and improved outcome(s)
- Renal pharmacist most suitable to resolve QI-DTP

Overall Consensus Criterion

- Resolving this QI-DTP will advance renal pharmacy practice to improve the quality of patient care

QI-DTP Consensus Threshold

- Determined after round-3
- ≥ 75% panelists score overall consensus criterion 7-9 on Likert scale

Consensus Building Process

- Panelists required to view voice-over presentation of study procedures and expectations before round-1
- Panelists required to review standardized evidence summary tables for each candidate renal QI-DTP
- Overall panel ratings for each candidate renal QI-DTP provided to all panelists between each round
- Panelist-specific ratings for each candidate renal QI-DTP provided to individual panelists between each round

Table 1. Delphi Panelists Characteristics

CHARACTERISTIC	n (%)
Female	13 (72%)
Renal Pharmacist Experience (yrs)	
2-5	7 (39%)
6-10	3 (17%)
11-15	7 (39%)
>15	1 (5%)
Academic Credentials	
Pharmacy Residency	15 (83%)
Post-entry to practice PharmD	8 (44%)
Masters Degree (Pharmacy)	3 (17%)
Tertiary/Quaternary Hospital	13 (72%)
Hospital Bed Size	
1-100	1 (5%)
101-250	2 (11%)
251-400	2 (11%)
> 400	11 (61%)
Not applicable	2 (11%)
Patient Care Setting	
Inpatients	1 (5%)
Outpatient clinics	10 (56%)
Both inpatients & outpatients	7 (39%)
Patient Sub-Population	
CKD – all stages pre-dialysis	13 (72%)
ESRD – Peritoneal dialysis	12 (67%)
ESRD - Hemodialysis	14 (78%)
Pharmacy Activities Provided	
Medication Reconciliation	18 (100%)
Resolve DTPs	18 (100%)
Pharmaceutical care planning	17 (94%)
Patient education/counseling	17 (94%)
Active participation in rounds	14 (78%)

Figure 1. Renal QI-DTP Generation

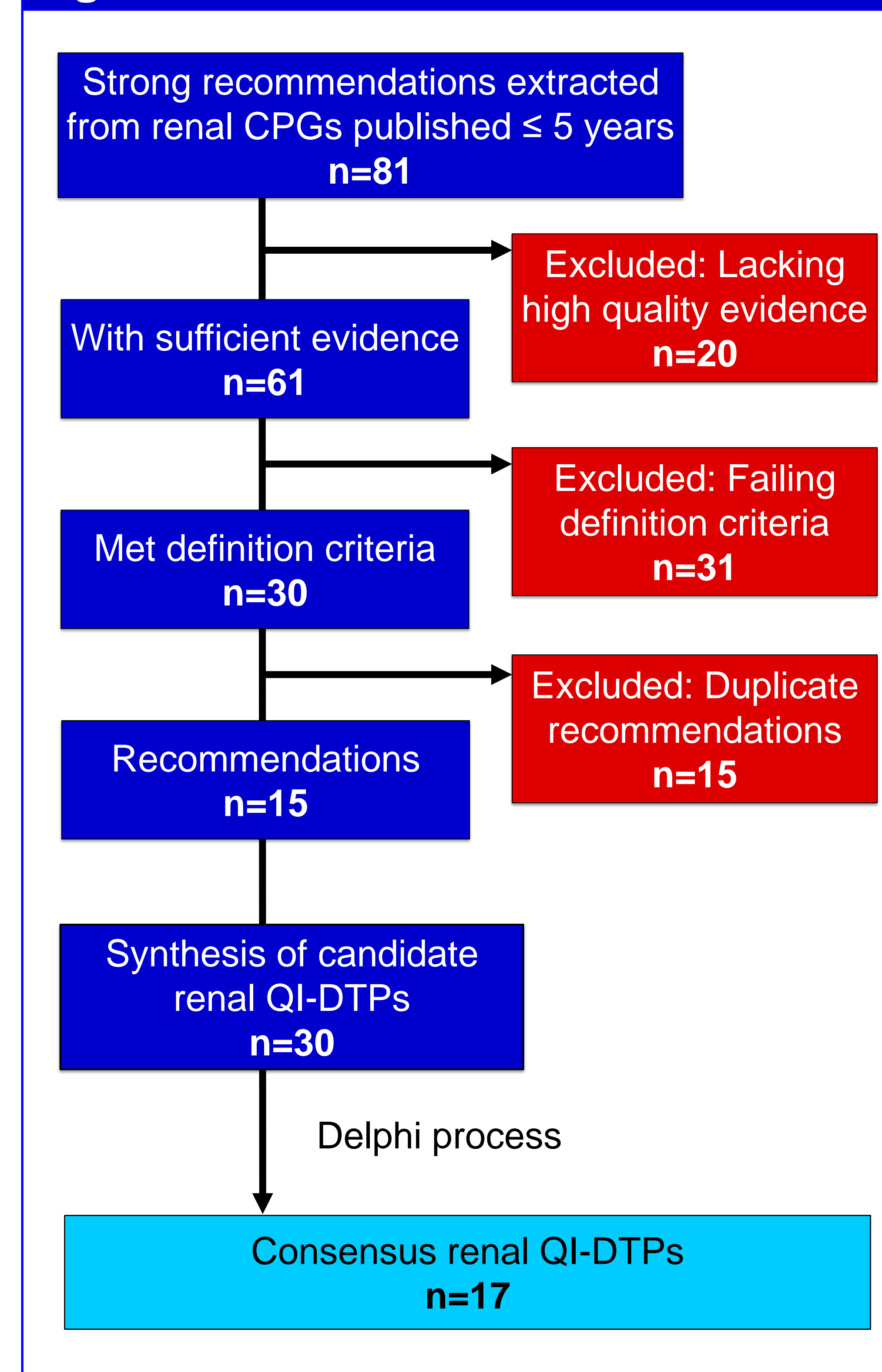


Table 2. Example Renal QI-DTPs

QI-DTP	n
Anemia	n=6
• Initiate iron therapy in patients with anemia of CKD who are iron deficient and not receiving ESA therapy before initiating ESA therapy	
Hypertension/Proteinuria	n=8
• Increase dose of ACE inhibitor (or ARB if intolerant) to a maximum target dose in patients with CKD and ACR ≥ 70mg/mmol irrespective of hypertension or cardiovascular disease	
CVD Prevention	n=2
• Initiate antiplatelet therapy in CKD patients for secondary prevention of CVD unless high risk of bleeding	
Diabetes	n=1
• Increase dose of anti-hyperglycemic therapy to target HbA1c of ~7% to prevent or delay progression of diabetic nephropathy in patients not at risk of hypoglycemia	

DISCUSSION

Strengths

- Explicit definition of QI-DTP
- Systematic review of renal CPGs
- High quality evidence incorporated into QI-DTPs
- Representative panel of experienced renal clinical pharmacists
- Complete survey response rate

Limitations

- Guidelines published greater than 5 years ago excluded
- New evidence will emerge during consensus process

Implications for Practice

- Renal QI-DTPs should be implemented to help prioritize care, advance renal pharmacy practice, and improve the quality of patient care

Future Initiatives/Research

- Broader stakeholder feedback
- Systematic dissemination and implementation of renal QI-DTPs across Canada to renal clinical pharmacists

CONCLUSION

Seventeen final consensus renal QI-DTPs were developed using a modified Delphi consensus process

