

## Report on a QI Project Eligible for MOC – ABMS Part IV and AAPA PI-CME

### Identification of hypertension in pediatric and adult patients with nephrotic syndrome in NephCure Accelerating Cures Institute (NACI) clinical care network

#### Instructions

**Determine eligibility.** Before starting to complete this report, go to the UMHS MOC website [ocpd.med.umich.edu], click on “Part IV Credit Designation,” and review sections 1 and 2. Complete and submit a “QI Project Preliminary Worksheet for Part IV Eligibility.” Staff from the UMHS Part IV MOC Program will review the worksheet with you to explain any adjustments needed to be eligible. (The approved Worksheet provides an outline to complete this report.)

**Completing the report.** The report documents completion of each phase of the QI project. (See section 3 of the website.) Final confirmation of Part IV MOC for a project occurs when the full report is submitted and approved.

An option for preliminary review (strongly recommended) is to complete a description of activities through the intervention phase and submit the partially completed report. (Complete at least items 1-20.) Staff from the UMHS Part IV MOC Program will provide a preliminary review, checking that the information is sufficiently clear, but not overly detailed. This simplifies completion and review of descriptions of remaining activities.

Questions are in bold font. Answers should be in regular font (generally immediately below or beside the questions). To check boxes, hover pointer over the box and click (usual “left” click).

For further information and to submit completed applications, contact either:

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#### Report Outline

Section	Items
<b>A. Introduction</b>	1-6. Current date, title, time frame, key individuals, participants, funding
<b>B. Plan</b>	7-10. Patient population, general goal, IOM quality dimensions, ACGME/ABMS competencies 11-13. Measures, baseline performance, specific aims 14-17. Baseline data review, underlying (root) causes, interventions, who will implement
<b>C. Do</b>	18. Intervention implementation date
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<b>E. Adjust – Replan</b>	21-24. Post-intervention data review, underlying causes, adjustments, who will implement
<b>F. Redo</b>	25. Adjustment implementation date
<b>G. Recheck</b>	26-28. Post-adjustment performance, summary of individual performance
<b>H. Readjust plan</b>	29-32. Post-adjustment data review, underlying causes, further adjustments, who will implement
<b>I. Reflections &amp; plans</b>	33-37. Barriers, lessons, best practices, spread, sustain
<b>J. Participation for MOC</b>	38-40. Participation in key activities, other options, other requirements
<b>K. Sharing results</b>	41. Plans for report, presentation, publication
<b>L. Organization affiliation</b>	42. Part of UMHS, AAVA, other affiliation with UMHS

## QI Project Report for Part IV MOC Eligibility

### A. Introduction

1. **Date** (*this version of the-report*): 10/2/2017
  
2. **Title of QI effort/project** (*also insert at top of front page*):  
 Identification of hypertension in pediatric and adult patients with nephrotic syndrome in NephCure Accelerating Cures Institute (NACI) clinical care network (<https://nephcure.org/research/naci/>)
  
3. **Time frame**
  - a. **MOC participation beginning date – date that health care providers seeking MOC began participating in the documented QI project** (*e.g. date of general review of baseline data, item #14c*):  
01/23/2017
  
  - b. **MOC participation end date – date that health care providers seeking MOC completed participating in the documented QI project** (*e.g., date of general review of post-adjustment data, item #29c*):  
09/08/2017

### 4. Key individuals

- a. **QI project co-leader** [*also responsible for confirming individual’s participation in the project*]

**Name:** Rebecca Lombel, MD  
**Title:** Pediatric Nephrologist  
**Organizational unit:** Michigan Medicine, Division of Pediatric Nephrology  
**Phone number:** 734-936-4210  
**Email address:** rlombel@med.umich.edu  
**Mailing address:** 1540 East Hospital Drive, SPC 4297, Ann Arbor, MI 48109

**QI project co-leader**

**Name:** Susan Massengill, MD  
**Title:** Pediatric Nephrologist  
**Organizational unit:** Levine Children’s Hospital, Division of Pediatric Nephrology  
**Phone number:** 704-381-8800  
**Email address:** susan.massengill@carolinashealthcare.org  
**Mailing address:** 1001 Blythe Blvd, Suite 200-E, Charlotte, NC 28203

- b. **Clinical leader who oversees project leader regarding the project** [*responsible for overseeing/”sponsoring” the project within the specific clinical setting*]

**Name:** David Kershaw, MD  
**Title:** Division director, Pediatric Nephrology  
**Organizational unit:** Michigan Medicine, Division of Pediatric Nephrology  
**Phone number:** 734-936-4210  
**Email address:** dkershaw@med.umich.edu  
**Mailing address:** 1540 East Hospital Drive, SPC 4297, Ann Arbor, MI 48109

### 5. Participants

- a. **Approximately how many health care providers (by training level for physicians) participated in this QI effort** (*whether or not for MOC*):

Profession	Number ( <i>fill in</i> )
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Practicing Physicians	81
Residents/Fellows	20
Physicians' Assistants	4
Nurses (APNP, NP, RN, LPN)	29
Other Licensed Allied Health (e.g., PT/OT, pharmacists, dieticians, social workers)	

**b. Approximately how many physicians (by specialty/subspecialty and by training level) and physicians' assistants participated for MOC?**

Profession	Specialty/Subspecialty (fill in)	Number (fill in)
Practicing Physicians	Internal medicine nephrology	10
	Pediatric nephrology	17
Fellows	Pediatric nephrology	2
Residents		
Physicians' Assistants	(Not applicable)	

**6. How was the QI effort funded? (Check all that apply.)**

- Internal institutional funds (e.g., regular pay/work, specially allocated)
- Grant/gift from pharmaceutical or medical device manufacturer
- Grant/gift from other source (e.g., government, insurance company)
- Subscription payments by participants
- Other source (describe): Funding through NephCure Accelerating Cures Institute (NACI)

The Multi-Specialty Part IV MOC Program requires that QI efforts include at least two linked cycles of data-guided improvement. Some projects may have only two cycles while others may have additional cycles – particularly those involving rapid cycle improvement. The items below provide some flexibility in describing project methods and activities. If the items do not allow you to reasonably describe the steps of your specific project, please contact the UMHS Part IV MOC Program Office.

**B. Plan**

**7. Patient population. What patient population does this project address (e.g., age, medical condition, where seen/treated):**

Patients ≥1 year with nephrotic syndrome from five clinical care network sites around the country enrolled in NephCure Accelerating Cures Institute (NACI)

**8. General purpose.**

**a. Problem with patient care (“gap” between desired state and current state)**

(1) What should be occurring and why should it occur (benefits of doing this)?

Despite previous studies demonstrating more rapid deterioration in kidney function due to hypertension in patients with chronic kidney disease, there are still significant discrepancies in the measurement, diagnosis, and management of hypertension in this high-risk population. Identification of hypertensive patients in the electronic medical record (EMR) is important to increase recognition of this important comorbidity and complication of kidney disease.

(2) What is occurring now and why is this a concern (costs/harms)?

It is widely accepted that in patients who have chronic kidney disease, comorbid conditions such as hypertension can accelerate declines in renal function. Lack of recognition of the presence of hypertension and inadequate blood pressure control in patients with chronic kidney disease can have detrimental effects on their renal function.

Currently, not all patients with chronic kidney disease and comorbid hypertension have the comorbidity identified in the diagnosis list or problem summary list in the EMR.

**b. Project goal. What general outcome regarding the problem should result from this project?** (State general goal here. Specific aims/performance targets are addressed in #13.)

The goal of the project is to increase the recognition of hypertension in those patients with nephrotic syndrome as defined by the guidelines of Pediatric 4<sup>th</sup> Report on the Diagnosis, Evaluation and Treatment of High Blood Pressure in Children and Adolescents and 8<sup>th</sup> Joint National Committee on Prevention, Detection, Evaluation and Treatment of Hypertension (JNC8).

**9. Which Institute of Medicine Quality Dimensions are addressed?** [Check all that apply.] (<http://www.nationalacademies.org/hmd/~media/Files/Report%20Files/2001/Crossing-the-Quality-Chasm/Quality%20Chasm%202001%20%20report%20brief.pdf>)

- Effectiveness
- Equity
- Safety
- Efficiency
- Patient-Centeredness
- Timeliness

**10. Which ACGME/ABMS core competencies are addressed?** (Check all that apply.) (<http://www.abms.org/board-certification/a-trusted-credential/based-on-core-competencies/>)

- Patient Care and Procedural Skills
- Medical Knowledge
- Practice-Based Learning and Improvement
- Interpersonal and Communication Skills
- Professionalism
- Systems-Based Practice

**11. Describe the measure(s) of performance:** (QI efforts must have at least one measure that is tracked across the two cycles for the three measurement periods: baseline, post-intervention, and post-adjustment. If more than two measures are tracked, copy and paste the section for a measure and describe the additional measures.)

Measure 1

- **Name of measure** (e.g., Percent of . . . , Mean of . . . , Frequency of . . .):

Percent of patients with hypertension (or elevated blood pressure) whose hypertension (or elevated blood pressure) is documented in the diagnosis list or problem list

- **Measure components** – describe the:

Denominator (e.g., for percent, often the number of patients eligible for the measure):

Number of patients enrolled in the NACI registry who are either:

- age 1-17 years with blood pressure (SBP or DBP) at the visit >95<sup>th</sup> percentile for age, gender and height
- age 18-65 years of age with blood pressure at office visit >140/90
- age >65 with blood pressure at office visit >150/90
- not in the above groups, but are any age and on anti-hypertensive agents (excluding ACEI or ARB).

If more than one blood pressure is documented at the clinic visit, the last documented blood pressure will be used.

Numerator (e.g., for percent, often the number of those in the denominator who also meet the performance expectation):

Number of patients in the denominator with documentation of hypertension (or elevated blood pressure) in their problem list or diagnosis list in the EMR

- **The source of the measure is:**
  - An external organization/agency, which is (*name the source*): NephCure Accelerating Cures Institute (NACI) database
  - Internal to our organization and it was chosen because (*describe rationale*):
- **This is a measure of:**
  - Process – activities of delivering health care to patients
  - Outcome – health state of a patient resulting from health care

**12. Baseline performance**

**a. What were the beginning and end dates for the time period for baseline data on the measure(s)?**

The NACI database was created 6/1/2016. The baseline data was for the time period 6/1/2016 through 12/31/2016. Data was pulled for each episode of care during that time period (i.e. each patient is a discrete visit and the problem list/diagnosis list was probed at the time of the visit).

**b. What was (were) the performance level(s) at baseline? *Display in a data table, bar graph, or run chart (line graph). Can show baseline data only here or refer to a display of data for all time periods attached at end of report. Show baseline time period, measure names, number of observations for each measure, and performance level for each measure.***

Time of Measurement	N of NACI patients seen	N of patients seen with HTN/ elevated BP	N of patients with HTN/ elevated BP and with BP in diagnosis list	Percent of patients with HTN/elevated BP and with BP in diagnosis list
<b>Baseline</b>				
(6/1/2016-12/31/16)				
All patients	487	220	164	75%
Adults (≥ 18 years)	295	163	133	82%
Pediatrics (1-17 years)	192	57	31	54%

**13. Specific performance aim(s)/objective(s)**

**a. What is the specific aim of the QI effort? *“The Aim Statement should include: (1) a specific and measurable improvement goal, (2) a specific target population, and (3) a specific target date/time period. For example: We will [improve, increase, decrease] the [number, amount percent of [the process/outcome] from [baseline measure] to [goal measure] by [date].”***

The aim of the project is to improve documentation of hypertension status (or elevated blood pressure status) in the problem list from a baseline of 75% to a rate of 80% for all patients who meet criteria for hypertension (or elevated blood pressure) by the end of two PSDA cycles (7/31/2017).

**b. How were the performance targets determined, e.g., regional or national benchmarks?**

Data collection since the inception of the NACI data base revealed a 75% documentation rate for hypertension (or elevated blood pressure) status for the aggregate patient group. The project team decided that an 80% documentation rate would be an appropriate target.

**14. Baseline data review and planning. Who was involved in reviewing the baseline data, identifying underlying (root) causes of problem(s) resulting in these data, and considering**

**possible interventions (“countermeasures”) to address the causes?** (Briefly describe the following.)

**a. Who was involved?** (e.g., by profession or role)

Primarily, physicians, physician assistants, nurse practitioners, and nurses were involved in data review. Generation and execution of interventions was undertaken by these individuals and ancillary staff.

**b. How?** (e.g., in a meeting of clinic staff)

Baseline data was shared by email with the leads at participating sites. It was the responsibility of the site lead to share the information with participants eligible for MOC IV credit, review the information, generate ideas and share interventions. This information was distributed at a site level by email, at division meetings and/or at meetings of clinical staff.

**c. When?** (e.g., date(s) when baseline data were reviewed and discussed)

Data collected since the inception of the NACI database was distributed to the site leads on 1/23/2017 by email. Site leads shared the information with participants during the month of 2/2017.

**Use the following table to outline the plan that was developed: #15 the primary causes, #16 the intervention(s) that addressed each cause, and #17 who carried out each intervention.** This is a simplified presentation of the logic diagram for structured problem solving explained at <http://ocpd.med.umich.edu/moc/process-having-part-iv-credit-designation> in section 2a. As background, some summary examples of common causes and interventions to address them are:

<b>Common Causes</b>	<b>Common Relevant Interventions</b>
<i>Individuals: Are not aware of, don't understand.</i>	<i>Education about evidence and importance of goal.</i>
<i>Individuals: Believe performance is OK.</i>	<i>Feedback of performance data.</i>
<i>Individuals: Cannot remember.</i>	<i>Checklists, reminders.</i>
<i>Team: Individuals vary in how work is done.</i>	<i>Develop standard work processes.</i>
<i>Workload: Not enough time.</i>	<i>Reallocate roles and work, review work priorities.</i>
<i>Suppliers: Problems with provided information/materials.</i>	<i>Work with suppliers to address problems there.</i>

<b>15. What were the primary underlying/root causes for the problem(s) at baseline that the project can address?</b>	<b>16. What intervention(s) addressed this cause?</b>	<b>17. Who was involved in carrying out each intervention? (List the professions/roles involved.)</b>
Individuals: Are not aware of importance of documenting hypertension diagnosis / treatment	Education about evidence and importance of goal	Physicians
Individuals: Believe their current rate of documentation is acceptable	Feedback of performance data	Physicians, nurses
Individuals: Believe their current management of known hypertension is acceptable	Feedback on performance data	Physicians

Individuals: Cannot remember to add hypertension diagnosis to problem list	Checklists, reminder	Physicians, nurses, MAs
Team: Individuals vary in how documentation work is done	Develop standard work processes	Physicians, nurses, MAs
Workload: Not enough time to address and document all issues during a visit	Re-allocate roles and work	Physicians, nurses, MAs

Site	Intervention by site to address causes above
Cedars Sinai	<ol style="list-style-type: none"> <li>1. Intake will be performed as usual by clinic nurses, which now occurs in patient rooms rather than intake room.</li> <li>2. Intake nurse will document the initial blood pressure in CS-Link (our EHR).</li> <li>3. While completing the medication review, nurse will review the initial BP documented in CS-Link. If it is out of range, she will re-check the BP. Out of range blood pressure will be determined by using our dot phrase (.BP for age, sex, height) OR by looking at a laminated table mounted on the blood pressure machines.</li> <li>4. If BP is high at re-check, nurse will notify the MD to re-check manually. She will notify the MD either in person, or make a note in patient chart during busier clinic times.</li> <li>5. After the 3<sup>rd</sup> BP check, MD will add hypertension to the problem list.</li> <li>6. If nurse is out of town, the physician will be responsible for noticing an out of range blood pressure, and ask a clinic nurse to recheck the blood pressure.</li> </ol>
Metrolina	Nurse or MA prompt physician when elevated blood pressure noted during intake assessment
University of Michigan (adult)	Use of the Epic search feature to create a list of all patients seen in nephrology in the past 12 months that have one of several versions of a nephrotic syndrome diagnosis on their problem list and have a last BP of >140/90 to find cases. We then review the chart to determine if it is appropriate to enter hypertension on the problem list.
University of Michigan (pediatrics)	Education provided to physicians, nurses, NP at division meeting Reminder card (Document – Add – Control) added to workstation computer screens
Stanford	Sent out periodic email reminders to add HTN to problem list when appropriate.
Levine Children’s	Pink labels affixed to all computers in renal clinic with “HTN: On the problem list?” as reminder to providers

**C. Do**

**18. By what date was (were) the intervention(s) initiated?** *(If multiple interventions, date by when all were initiated.)*

3/6/2017

**D. Check**

**19. Post-intervention performance measurement. Are the population and measures the same as those for the collection of baseline data (see items 10 and 11)?**

Yes       No – If no, describe how the population or measures differ:

**20. Post-intervention performance**

**a. What were the beginning and end dates for the time period for post-intervention data on the measure(s)?**

5/1-5/31/2017

**b. What was (were) the overall performance level(s) post-intervention?** *Add post-intervention data to the data table, bar graph, or run chart (line graph) that displays baseline data. Can show baseline and post-intervention data incrementally here or refer to a display of data for all time periods attached at end of report. Show baseline and post-intervention time periods and measure names and for each time period and measure show number of observations and performance level.*

Time of Measurement	N of NACI patients seen	N of patients seen with HTN/ elevated BP	N of patients with HTN/ elevated BP and with BP in diagnosis list	Percent of patients with HTN/elevated BP and with BP in diagnosis list
<b>Baseline</b> (6/1-12/31/2016)				
All patients	487	220	164	75%
Adults (≥ 18 years)	295	163	133	82%
Pediatrics (1-17 years)	192	57	31	54%
<b>Post-Intervention</b> (5/1-5/31/2017)				
All patients	207	45	38	84%
Adults (≥ 18 years)	134	28	28	100%
Pediatrics (1-17 years)	73	17	10	59%

**c. Did the intervention(s) produce the expected improvement toward meeting the project’s specific aim (item 13.a)?**

Yes, there was an improvement from baseline data to that collected during the first period following intervention from 75% to 84%, exceeding the target of 80%.

**E. Adjust – Replan**

**21. Post-intervention data review and further planning. Who was involved in reviewing the post-intervention data, identifying underlying (root) causes of problem(s) resulting in these new data, and considering possible interventions (“countermeasures”) to address the causes? (Briefly describe the following.)**

**a. Who was involved?** (e.g., by profession or role)

Same as #14?     Different than #14 (describe):

**b. How?** (e.g., in a meeting of clinic staff)

Same as #14?     Different than #14 (describe):

**c. When?** (e.g., date(s) when post-intervention data were reviewed and discussed)

Data was distributed to site leads on 6/11/2017. Site leads subsequently shared data with project participants. Individual sites discussed data, brainstormed interventions and set them in place by 6/30/2017.

**Use the following table to outline the next plan that was developed: #22 the primary causes, #23 the adjustments/second intervention(s) that addressed each cause, and #24 who carried out each intervention. This is a simplified presentation of the logic diagram for structured problem solving explained at <http://ocpd.med.umich.edu/moc/process-having-part-iv-credit-designation> in section 2a.**

*Note: Initial intervention(s) occasionally result in performance achieving the targeted specific aims and the review of post-intervention data identifies no further causes that are feasible or cost/effective to address. If so, the plan for the second cycle should be to continue the interventions initiated in the first cycle and check that performance level(s) are stable and sustained through the next observation period.*

22. What were the primary underlying/root causes for the <u>problem(s) following the intervention(s)</u> that the project can address?	23. What adjustments/second intervention(s) addressed this cause?	24. Who was involved in carrying out each adjustment/second intervention? (List the professions/roles involved.)
Individuals caring for pediatric patients: Are still not aware of importance of documenting hypertension diagnosis**	Continued education about evidence and importance of goal	Physicians
Individuals caring for pediatric patients: Hesitant to make diagnosis of hypertension based on reading from one appointment (are not aware of elevated blood pressure diagnosis)**	Continued education about importance of goal Continued feedback of performance data, adding Data distribution on patients who met criteria but did not have diagnosis (chart review at individual sites)	Physicians, nurses
Individuals: Believe their current management of known hypertension is acceptable**	Continued feedback on performance data	Physicians
Individuals: Still cannot remember**	Checklists, reminder	Physicians, nurses, MAs
Team: Individuals still vary in how work is done**	Refined/reinforced standard work processes	Physicians, nurses, MAs

*\*\*It is noted that during the first cycle, there was 100% documentation rate for adult patients. For pediatric patients, documentation rate was slightly improved at 59% (from baseline 54%).*

Site	Intervention by site to address causes above
Cedars Sinai	The providers worked with our nursing staff to be sure that all patients had their BPs measured with the correct sized cuff. If the BP was above the 95%, the nurses were instructed to repeat the BP first with an automated cuff and then if still elevated, the physician would check BP with a manual cuff. We implemented the use of a dot phrase in our EMR that automatically categorized the patient's blood pressure by age, gender and height percentile. If the patient's blood pressure was elevated, a diagnosis of hypertension or elevated BP was added to the patient's problem list.
Metrolina	Nurse or MA prompt physician when elevated blood pressure noted during intake assessment

	Reviewed process with clinic check-in staff who assist with vital signs
University of Michigan (adult)	Continued use of the automated search strategy in the EMR. For first cycle, used search strings for “nephrotic syndrome” groups and limited the search to patients with a blood pressure of >140/90 during the past six months. For the second cycle, added lab value of spot urine protein-to-creatinine ratio of >3.0. This is because during the first cycle there were some difficulties with the initial approach – (1) groupers were very broad and other forms of kidney disease beyond nephrotic syndrome were included and (2) some instances of nephrotic syndrome were of historical value as patient progressed to ESRD, etc. Providers then reviewed the chart to determine if it was appropriate to enter hypertension on the problem list.
University of Michigan (pediatrics)	Education provided to physicians, nurses, NP at division meeting – particularly regarding ‘elevated blood pressure’ diagnosis for those hesitant to add ‘hypertension’ based off of one day’s readings Provides encouraged to use dot-phrase (.bpfawr) which automatically generates blood pressure percentile based on 4 <sup>th</sup> Report Reviewed blood pressure percentiles with nurses who see patients before provider and had them repeat manually. If BP was still above 95 <sup>th</sup> ile, provider notified.
Stanford	Sent out email reminder one day prior to clinic for providers to add HTN or elevated blood pressure to problem list Education provided at faculty division meeting
Levine Children’s	Site lead had individual meetings with physicians to review aim, goals and data of the project.

**F. Redo**

**25. By what date was (were) the adjustment(s)/second intervention(s) initiated?** *(If multiple interventions, date by when all were initiated.)*

6/30/2017

**G. Recheck**

**26. Post-adjustment performance measurement. Are the population and measures the same as indicated for the collection of post-intervention data (item #21)?**

Yes     No – If no, describe how the population or measures differ:

**27. Post-adjustment performance**

**a. What were the beginning and end dates for the time period for post-adjustment data on the measure(s)?**

7/1-7/31/2017

**b. What was (were) the overall performance level(s) post-adjustment?** *Add post-adjustment data to the data table, bar graph, or run chart (line graph) that displays baseline and post-intervention data. Can show here or refer to a display of data for all time periods attached at end of report. Show time periods and measure names and for each time period and measure show the number of observations and performance level.*

Time of Measurement	N of NACI patients seen	N of patients seen with HTN/ elevated BP	N of patients with HTN/ elevated BP and with BP in diagnosis list	Percent of patients with HTN/elevated BP and with B in diagnosis list
<b>Baseline</b> (6/1-12/31/2016)				
All patients	487	220	164	75%
Adults (≥ 18 years)	295	163	133	82%
Pediatrics (1-17 years)	192	57	31	54%
<b>Post-Intervention</b> (5/1-5/31/2017)				
All patients	207	45	38	84%
Adults (≥ 18 years)	134	28	28	100%
Pediatrics (1-17 years)	73	17	10	59%
<b>Post-Adjustment</b> (7/1-7/31/2017)				
All patients	175	51	42	82%
Adults (≥ 18 years)	108	28	28	100%
Pediatrics (1-17 years)	67	23	14	61%

**c. Did the adjustment(s) produce the expected improvement toward meeting the project’s specific aim (item 13.a)?**

There was an improvement from baseline data to that collected during the first period following intervention from 75% to 82%, exceeding the aggregate goal of 80%. There was again a documentation rate of 100% for adult patients, which is excellent.

**28. Summary of individual performance**

**a. Were data collected at the level of individual providers so that an individual’s performance on target measures could be calculated and reported?**

- Yes       No – go to item 29

**H. Readjust**

**29. Post-adjustment data review and further planning. Who was involved in reviewing the post-adjustment data, identifying underlying (root) causes of problem(s) resulting in these new data, and considering possible interventions (“countermeasures”) to address the causes? (Briefly describe the following.)**

**a. Who was involved? (e.g., by profession or role)**

- Same as #21?       Different than #21 (describe):

**b. How? (e.g., in a meeting of clinic staff)**

- Same as #21?       Different than #21 (describe):

**c. When? (e.g., date(s) when post-adjustment data were reviewed and discussed)**

**Use the following table to outline the next plan that was developed: #30 the primary causes, #31 the adjustments(s)/second intervention(s) that addressed each cause, and #32 who would carry out each intervention. This is a simplified presentation of the logic diagram for structured problem solving explained at <http://ocpd.med.umich.edu/moc/process-having-part-iv-credit-designation> in section 2a.**

*Note: Adjustments(s) may result in performance achieving the targeted specific aims and the review of post-adjustment data identifies no further causes that are feasible or cost/effective to address. If so, the plan for a next cycle could be to continue the interventions/adjustments currently implemented and check that performance level(s) are stable and sustained through the next observation period.*

30. What were the primary underlying/root causes for the <u>problem(s)</u> following the <u>adjustment(s)</u> that the project can address?	31. What further adjustments/ intervention(s) might address this cause?	32. Who would be involved in carrying out each further adjustment/intervention? (List the professions/roles involved.)
Individuals caring for pediatric patients: Are still not aware of importance of documenting hypertension diagnosis**	Continued education about evidence and importance of goal	Physicians
Individuals caring for pediatric patients: Hesitant to make diagnosis of hypertension based on reading from one appointment (are not aware of elevated blood pressure diagnosis)**	Continued education about importance of goal Continued feedback of performance data, including Ongoing data distribution on patients who met criteria but did not have diagnosis (chart review at individual sites)	Physicians, nurses
Individuals caring for pediatric patients: Believe their current management of known hypertension is acceptable**	Continued feedback on performance data including Ongoing data distribution on patients who met criteria but did not have diagnosis (chart review at individual sites)	Physicians
Individuals caring for pediatric patients: Still cannot remember**	Checklists, reminder	Physicians, nurses, MAs

*\*\*It is again noted that during the second cycle, there was 100% documentation rate for adult patients. For pediatric patients, documentation rate was slightly improved at 61% (from 59% after first cycle).*

33. Are additional PDCA cycles to occur for this specific performance effort?

- No further cycles will occur.
- Further cycles will occur, but will not be documented for MOC. *If checked, summarize plans:*

As this is part of an ongoing quality improvement project for NACI, data extraction will be continuing. Data will continue to be reviewed by QI project co-leads with distribution to site leads. Data extraction will continue to include patients who meet criteria for hypertension or elevated blood pressure but do not have an associated diagnosis in their problem list or diagnosis list. It is the expectation of sites that they continue chart review for these patients to determine the appropriateness of documenting the diagnosis.

This project is the NACI group’s first QI project and efforts to establish other projects are currently underway going. We view this project as the first step toward the ultimate goal of improving patient care and outcomes. As such, the first step is recognition of important comorbidities of

nephrotic syndrome. Upcoming QI projects will start to focus on appropriate control of these comorbidities for individual patients.

- Further cycles will occur and are to be documented for MOC. *If checked, contact the UM Part IV MOC Program to determine how the project's additional cycles can be documented most practically.*

## I. Reflections and Future Actions

### 33. Describe any barriers to change (i.e. problems in implementing interventions listed in #16 and #23) that were encountered during this QI effort and how they were addressed.

This was the first QI project for the NACI group. Barriers were identified at several levels:

1. Organizational level. Data extraction was initially provided to the NACI QI co-leads who, in turn, were responsible for distribution of data to the site leads. Several barriers were identified as we worked through this first project – timely distribution of data to individual sites; timely responses from individual sites on interventions and plans; coordinating intervention efforts across sites that identified potentially different issues with their process. Over the course of the project, we standardized data delivery dates and send clear due dates for feedback with reminder emails. We recognized that given the unique barriers at each site, there were some interventions that would be site specific and others that would cross institutions and be reasonable 'standards' at all sites (addressed below).

2. Individual site level. Several sites identified that faculty are historically not very good at using/updating the problem list or diagnosis list. At all sites, only a portion of faculty participated in the QI project, but in general NACI patients were seen in general nephrology clinics by providers who may not be participating in the QI efforts. As such, to be effective at an institutional level, data would need to be distributed to all faculty, not just those participating in QI efforts. The way to implement this at sites is to distribute data to all providers, not just those involved in the QI project or strongly recommend/require that all providers be involved in the project.

As shown in our data, following the first and second cycles, adult ( $\geq 18$  years of age) documentation rates were 100%. Pediatric sites identified that not having a specific blood pressure value (i.e. 140/90) and needing to know blood pressure percentiles was a limiting factor to appropriate identification and documentation of hypertension or elevated blood pressure. The use of dot phrases in the EMR was identified as a significant area for intervention/improvement.

3. Procedural level. Most sites identified the process of obtaining vital signs and recognition of elevated blood pressure readings as a major barrier. As such, addressing/implementing a process/protocol/checklist was an intervention identified by several sites. At the majority of sites, the most common barrier to change in the process was related to turnover of nursing staff or if the usual intake nurse was not available, the repeat blood pressure protocol as not consistently implemented. Regarding turnover of staff, inadequate on-boarding to the process limited its success, particularly in pediatric clinics.

### 34. Describe any key lessons that were learned as a result of the QI effort.

For the group's co-leads, an important lesson was the management of a multi-center QI effort with regards to data distribution and education. As part of the QI project, with data distribution, there were three educational Powerpoint presentations distributed on quality improvement. Though it was recommended that these be reviewed at individual sites, it was clear this was not consistently done. For future QI efforts, plan is to have web-based 'office hours' every four weeks for call-ins to discuss the educational Powerpoint presentations. In addition, the vast majority of communication regarding the project from co-leads to site leads was via email. For future projects, plan is to email data for

distribution and then set up conference calls the same week with site leads to review the data, brainstorm ideas and discuss implementation.

At the institutional level, the gaps in documentation (particularly in pediatrics) highlight the need for physicians to recognize comorbidities associated with nephrotic syndrome, particularly hypertension. We realized that, particularly in pediatrics, physicians are hesitant to put a label of hypertension for a patient and that one of our barriers was lack of recognition of the 'elevated blood pressure' diagnosis. As discussed above, some sites had only initially distributed data to those signed up for participation but it was clear that other providers were also taking care of these patients so data needs to be distributed to the entire division.

At the procedural level, one key lesson for all sites was the need for repeated reinforcement/education of blood pressure measurement protocols (and in some instances, development of such protocols) and for training/on-boarding of new personnel or 'covering personnel.'

For pediatric patients, given that the diagnosis is made based on a percentile, the use of dot phrases to identify the blood pressure percentiles was quite helpful. Automating a process (i.e. building templates that have this dot phrase in it) is important. Also, given that it is known which nephrotic syndrome and chronic kidney disease that these patients are at risk for hypertension, having a template that has 'risk of hypertension' in the impression/plan (particularly in pediatrics) is beneficial as a critical part of hypertension/elevated blood pressure recognition is consistently acknowledging blood pressure percentiles regardless of whether they fall in the normal range.

**35. Describe any best practices that came out of the QI effort.**

Using the search features of the EMR to identify patients who have an elevated blood pressure but do not have the diagnosis on their problem list.

Use of dot phrases in the EMR for pediatric blood pressures to automatically identify blood pressure percentiles.

Developing/implementing protocols for when elevated blood pressures are obtained by check in staff.

Ongoing efforts for education/onboarding of ancillary staff with regard to blood pressure protocols.

Review of data at a divisional level, not just with participants who signed up for the QI efforts.

At one site, confirmed blood pressure percentiles > 90<sup>th</sup> percentile for age, gender and height lead to interventions such as repeat blood pressure measurement, return for BP measurement either at the clinic or primary care provider's office, echocardiogram, 24 hour ambulatory blood pressure monitor, radiographic study or modification of antihypertensive therapy

**36. Describe any plans for spreading improvements, best practices, and key lessons.**

The best practices and key lessons have been shared between participating sites. In addition, protocols and dot phrases have been shared to help to standardize identification processes.

This project has been the first QI effort for the NACI group. Future projects will focus past identification toward management which can impact individual patients.

**37. Describe any plans for sustaining the changes that were made.**

It has been noted that often trainees are with faculty members to care for patients, use of dot phrases are now shared with all trainees who rotate through clinics. Similarly, as nurses are often involved in the patient check-in process, some sites are allowing nurses to add diagnoses to the problem or diagnosis list to assist the faculty.

To hardware changes, several sites are setting up scheduled automated data searches in their EMR to review patients who have elevated blood pressures but no diagnosis. This is in addition to the NACI group's distribution of data with similar information.

This process has also highlighted the need to re-establish care for patients lost to follow up who have uncontrolled hypertension. One site is running reports quarterly and will coordinate with their call center so that patients who have canceled clinic visits and have not rescheduled can have appointments set up again.

The NACI group will continue data extraction and distribution to the participating sites and provide support for implementation of changes.

## J. Minimum Participation for MOC

### 38. Participating directly in providing patient care.

#### a. Did any individuals seeking MOC participate directly in providing care to the patient population?

Yes     No    *If "No," go to item #39.*

#### b. Did these individuals participate in the following five key activities over the two cycles of data-guided improvement?

- Reviewing and interpreting baseline data, considering underlying causes, and planning intervention as described in item #14.
- Implementing interventions described in item #16.
- Reviewing and interpreting post-intervention data, considering underlying causes, and planning intervention as described in item #21.
- Implementing adjustments/second interventions described in item #23.
- Reviewing and interpreting post-adjustment data, considering underlying causes, and planning intervention as described in item #29.

Yes     No    *If "Yes," individuals are eligible for MOC unless other requirements also apply and must be met – see item # 40.*

### 39. Not participating directly in providing patient care.

#### a. Did any individuals seeking MOC not participate directly in providing care to the patient population?

Yes     No    *If "No," go to item 40.*

#### b. Were the individual(s) involved in the conceptualization, design, implementation, and assessment/evaluation of the cycles of improvement? (E.g., a supervisor or consultant who is involved in all phases, but does not provide direct care to the patient population.)

Yes     No    *If "Yes," individuals are eligible for MOC unless other requirements also apply and must be met – see item # 40. If "No," continue to #39c.*

#### c. Did the individual(s) supervising residents or fellows throughout their performing the entire QI effort?

Yes     No    *If "Yes," individuals are eligible for MOC unless other requirements also apply and must be met – see item # 40.*

### 40. Did this specific QI effort have any additional participation requirement for MOC? (E.g., participants required to collect data regarding their patients.)

Yes     No    *If "Yes," describe:*

Individuals who want their participation documented for MOC must additionally complete an attestation form, confirming that they met/worked with others as described in this report and reflecting on the impact of the QI initiative on their practice or organizational role. Following approval of this report, the UMHS QI MOC Program will send to participants an email message with a link to the online attestation form.

## K. Sharing Results

### 41. Are you planning to present this QI project and its results in a:

- Yes  No Formal report to clinical leaders?  
 Yes  No Presentation (verbal or poster) at a regional or national meeting?  
 Yes  No Manuscript for publication?

## L. Project Organizational Role and Structure

### 42. UMHS QI/Part IV MOC oversight – indicate whether this project occurs within UMHS, AAVA, or an affiliated organization and provide the requested information.

**University of Michigan Health System**

• **Overseen by what UMHS Unit/Group? (name):** Pediatric Nephrology division

• **Is the activity part of a larger UMHS institutional or departmental initiative?**

- No  Yes – the initiative is (name or describe): NephCure Accelerating Cures Institute (NACI) network, a multi-center collaborative network providing care for nephrotic syndrome patients

**Veterans Administration Ann Arbor Healthcare System**

• **Overseen by what AAVA Unit/Group? (name):**

• **Is the activity part of a larger AAVA institutional or departmental initiative?**

- No  Yes – the initiative is:

**An organization affiliated with UMHS to improve clinical care**

• **The organization is (name):**

• **The type of affiliation with UMHS is:**

- Accountable Care Organization (specify which member institution):**  
 **BCBSM funded, UMHS lead state-wide Collaborative Quality Initiative (specify which):**  
 **Other (specify):**