CDS Configuration Example - CHC Inc.*

Target =	Percent of all patients with diabetes mellitus and BP<140/90 (NQF 0061)
Current Performance on Target =	Performance on target measure increased from 63% in 1/2011 to 73% in 2013

		Optimal State (sample activities to optimize performance) **			Current State (Your current CDS/QI configuration)						Enhanced State (improvements you could implement)	
					CDS 5 Rights							
Decision Support Opportunity		Care Activities	Examples of Care Activities	Notes	Who? (people)	What? (information)	Where? (channels)	How? (Formats)	When? (Workflow)	Notes	Proposed Enhancements (locally or by EHR vendor)	Notes
	Not Visit-Related	Patient understands condition and treatment; follows care plan developed in collaboration with care team	Patient addresses agreed-upon lifestyle changes (diet, exercise, etc.), takes medications, keeps appointments, documents key clinical information (weight, blood sugar, blood pressure, food diary, etc.), understands resources available for care including help line & clinic locations for urgent care	Consider opportunities to support patients at home, grocery store/restaurants, etc., where their decisions/actions influence the target	Patients/family	Self monitored BP readings (taken with proper technique as directed), if this care approach is selected	Omron 3 FDA approved monitor; results can be phoned in, hand delivered to office staff, transmitted electronically from remote monitor via cell phone (for study patients)	Patients record results on paper-based self monitor grid for study patients, results are transmitted automatically to office from remote monitors	BP reading taken 2 times per day; shared with office stuff during visits or phoned in	Staff scans in BP self monitor grids, provider reviews and responds		
	Before Patient Comes to Office	Patient reviews/updates/submits pertinent health status data. Remind patient about visit	Patient helps create 'pre-visit summary' that provides/validates key data such as allergies, medications, problems, self-monitoring results (BP, blood sugar, etc.). Remind patient to keep appointment and prepare as needed	EHR portals that enable patients to interact with information in their record help enable patient data review and submission	EHR	Appointment reminders to patients who have signed up to receive these notifications	Automated text message communication from EHR to patient's smartphone		Messages sent day before scheduled office visit	Patients are asked how they like to receive communications. If by text message, information is entered into EHR, which then automatically sends the texts		
					MA	BP information, remind patient to bring meds in	Phone, action alerts in EHR	Verbal reports, texting patients (potential for trained user), use alerts in EHR to look for needed tests	Done throughout the day, when MAs have time. Prioritized by urgency			
	Daily Care Team Huddle	List visit action items and preparations for each patient to be seen during the day	1. Gathering key data such as reports from recent tests and consultations 2. Preparing for care transitions 3. Planning/scheduling tests/treatments needed during each visit	Support staff can 'pend' orders for needed interventions during these discussions with the provider	MA, Provider	Huddle to review chart in EHR, look for needed labs, tests, referrals for patients being seen within next 24 hours. Templates pre-populated some with orders, alerts and immunization list reviewed. Needed care items not in placed in orders are documented on "sticky note" at the top of the EHR chart for each patient	Various EHR-based channels and formats are used for data review and document/order preparation, e.g. documentation templates, results review, chart document repository, orders, 'sticky note' function		Huddles usually within 24 hours of patient visit, with details determined by each provider	Before the huddle, RN Care Manager reviews alerts in EHR and populates EHR with needed testing/evaluations (see 'Population-oriented activities' below). Each provider manages and customizes some details of their 'huddle' process		
Patient-specific Activities	During Office Visit	Check-in	Review/verify/update patient information	1. Review insurance information to help determine formularies/coverage to minimize patient out-of pocket expenses and enhance adherence 2. Verify clinical information (allergies, medications, problem list), e.g., by providing patient a 'pre-visit summary' to review	There are different tools, channels, workflows for handling this information flow, e.g., front desk staff gives electronic forms on tablet computer, patient returns tablet to rooming staff	Front office staff	May have patient give urine samples, prompted by pre-visit preparation (i.e., team huddle)	Front desk	Small stickers printed prior to patient visit from EHR and given to front desk staff at check in point	Instructions given by front desk staff (at end of the check-in procedure) to patient about proving the sample			
		Waiting	Gather patient data, provide educational info	Patient completes pre-visit health form, reviews educational materials and clinical resources related to their health issues	Can be a continuation of activities started during check-in; e.g., reviewing pre-visit summary								
		Rooming	Clinical support staff documents/reviews key information with patient before provider encounter	1. Obtain and document vital signs (e.g., blood pressure [repeat if abnormal], height, weight, BMI), chief complaint in patient's words and brief details 2. Review and compare with EHR data patient-reported allergies (reaction/severity) and medications (dose, route, frequency, pharmacy), including non-prescription medications and supplements (to help identify potential drug-drug interactions) 3. Note needed medication refill orders	Clinician/practice-developed protocols help ensure data is collected and entered into EHR properly (e.g., appropriate technique for recording blood pressure, responding to abnormal values, and documenting results)								
		Provider Encounter	History and Physical	1. Review and discuss previous encounter records/consultation notes/medications/test results/patient-submitted information (e.g., health status forms) 2. Discuss symptoms, adherence/barriers to jointly developed care plan, response to treatment, other patient issues 3. Provider physical exam, including assessing key target-related findings		Patient	Report meds on, ideally bring them to show, bring any self-monitor BP levels, med lists if have them	In person interactions, with documentation in EHR	Documentation templates within EHR (see screen shot of BP templates in corresponding Case Example narrative)	During separate interactions with MA and provider, as outlined in next 2 rows	Revisit automating these workflows when patient portal implemented		
			Documentation	Document key information needed to support appropriate decision making and action. For example, information associated with other specific 'Care Activities' in this column	Documentation is called out separately in this worksheet row to highlight the use of tools that help ensure key information is documented appropriately								
			Assessment/Diagnosis and Care Plan	Provider assesses clinical data, formulates management recommendations and engages patient in shared decision making to create a care plan									
			Ordering	Write orders/prescriptions for meds, labs/diagnostic tests, follow-up visits, referrals, other interventions appropriate to address shared patient/provider care goals	Insurance information gathered earlier can support prior authorization, minimize out-of-pocket patient expenses and hassles								
			Procedures	In-office immunizations, lab testing, other clinical interventions - especially those related to target		MA-Patient	Review any EHR alerts about needed interventions. Check BP per protocol for best BP, ask meds and record them, assess adherence, assess need for health education and provides education, assess home BP monitor accuracy if this needs to be done, teach back with visit summary at end of visit	In person interactions, with documentation in EHR	Documentation templates, non-interruptive alerts about needed interventions	MAs usually see the provider before the provider and these support activities occur during that interaction	"Teach back" is method used to ensure patients understand their meds, appts, self care. See http://www.nchealthliteracy.org/toolkit/tool5.pdf		
			Patient Education	1. Ensure patient (and care-givers) understand and are engaged with care plan, e.g., by providing and discussing 'after visit summary' with patient 'teach back' 2. Provide supplemental educational materials to help them understand and manage their condition	Consider patient language, culture and health literacy in providing education; e.g. using engaging material in the appropriate language, reading level, and with diagrams/videos as appropriate to optimize value	Provider-Patient	Assess for depression in patients not meeting goal. Might show patient lab results, trends on BP on a graph in EHR, weight graphs, visit summary; printing out this information for patient along with education materials, as appropriate. Heavy use of documentation templates to: assess therapies, assess medication and care plan adherence, document examinations, update care plan. Heavy use of order sets to: plan testing, ask for health education referral, modify medications (after discussion with patient), plan for BP self-monitoring if continued at home	EHR documentation and ordering modules. Printouts of selected material for patients to carry home	EHR-facilitated relevant data display (e.g. data tables and charts), documentation templates, order sets and ordering related tools, visit summaries, screening tools. There are documentation templates specifically for med adherence, self-management, and HTN management (heavy on questions on self-care, weight, exercise, salt, and salt management). HTN order sets include: common practice-preferred medications (generics, 90-day supplies); pertinent labs (creatinine, urine protein); home blood pressure monitor prescriptions; education materials for patients on sodium reduction; referrals for dietary education. Visit summaries are used for 'teach back' to make sure patient understands medications, follow-up appointments, lifestyle goals, etc. PHQ-9 depression screening tool used. Formularies added to e-prescribing lists to help minimize patient out-of-pocket costs. Pre-populated referrals for dietary education. BP meds default to 90-day supply to decrease patient time spent obtaining refills. Medication fill review tool to assess adherence	Throughout clinician/patient interactions			

Activity	Description	Details	Capabilities	People	Narrative	Communication Method	Education/Reference	Timing	Location	Consider	
Encounter Closing	Additional education and Checkout	1. Provide detailed guidance on diet, training on use of devices such as glucometers, home blood pressure monitors, inhalers (e.g., by dietician, nurse educator, etc.). 2. Schedule next office visit/referrals, schedule appropriate labs or imaging studies - address prior authorization		Health ed or MA if the patient is a walk in and health ed not there (both trained on effective patient education techniques), Patient	Patient education handouts for HTN and other conditions provided and discussed. BP monitor teaching if needed; have a BP training checklist to help ensure patient are using home monitors correctly	Verbal discussion, EHR-generated educational printouts.	Education/reference information	After provider encounter	Can happen in exam room and/or health ed room	Consider sending information electronically when patient portal available	
After Patient Leaves Office	Ensure care plan is executed appropriately	1. Follow-up (via various methods as appropriate) to verify patient understanding and adherence to treatment plan (e.g., medications and appointments) 2. Verify completion of scheduled lab/consult/imaging studies and that results are entered in EHR; respond appropriately to abnormals		MA, Health Educator, Patient	Interactions between patients and staff to follow-up on BP readings. Provider alerted if BP out of target range and medication titration may be needed	Patient phone in BPs or they are sent automatically (for study patients). Some providers have Health Educator monitor their patients' BPs by calling/texting. Staff notify provider about out of range readings via a message in the EHR or verbally		Ad hoc, based on when patient sends BP data, or proactive based on care plan			
Outside Patient-specific Encounters	Identify/address care gaps across the patient panel.	1. Use patient lists generated from registry to identify prevention and chronic care management gaps for individual patients 2. Address gaps, e.g., contact patients overdue for indicated visits/interventions and arrange appropriate action	Build needed capabilities for addressing gaps broadly across patients. For example: new/enhanced activities such as group visits for diabetes patients, more robust materials such as diet/exercise/BP/weight logs and plans for weight/HTN/DM management. Understand/address implications of Payer condition management outreach to patients	MA, Health ed, maybe Provider, ideal state Population Manager RN (there is a population manager for DM patients but NOT yet for HTN diagnosis without DM)	Suggest items needed at appt (for huddle) writes in EMR sticky note recall-targeted HTN patients to come in for office visit, e.g., patient with no appts or no show, and patients not at BP goal. Might catch patient asking for refills and prompt the patient to come in or advise pharmacy to tell them to come in	Use laptop to review data. Outreach to patient via a combination of text messages or email, post cards or letters, phone calls, documented in EHR	Registry reports, patient lists, provider quality scorecards. Text or email patient, post cards or letters, phone calls. When refills come in they are centrally managed by RN and protocol for refills, if she notes a patient needing to come in she will prompt them			Patient communication preferences can be documented in EHR as part of certified EHR technology requirements	Discussing hiring a Population Manager specifically for HTN

*This worksheet describes the CDS configuration for blood pressure control in diabetes patients implemented by Dr. Sarah Woolsey and colleagues at CHC, Inc. For further narrative details, see the corresponding QI case study.
** Information in these columns is carried forward unchanged from the Detailed Ambulatory Worksheet blank form.

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