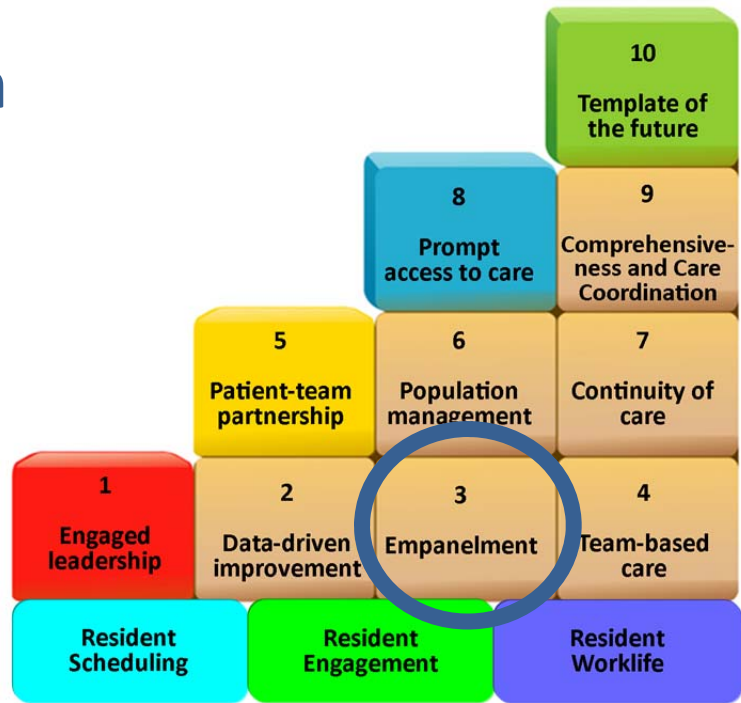


## Toolkit for Empanelment in Teaching Clinics



Empanelment means linking each patient to a primary care clinician and, ideally, to a stable team. Empanelment is a prerequisite for patient-clinician continuity, which lays the foundation for the longitudinal therapeutic relationships at the heart of good primary care. Clinicians know their patient panel, and patients know their primary care clinician. Although empanelment is a relatively simple concept, it becomes complex in residency clinics.

## In this Toolkit

### Steps for empanelment in your clinic

- |  |         |
|--|---------|
| <b>1. Make the case.</b> Why empanelment is important.   | Page 3  |
| <b>2. Assign patient panels.</b> How to get started.   | Page 4  |
| <b>3. Actively monitor patient panels.</b> Maintain ongoing process.                               | Page 6  |
| <b>4. Transfer panels when residents graduate.</b> Ensure patients do not get lost in the shuffle. | Page 10 |

### How did they do it? (Case highlights)

- |   |         |
|---|---------|
| ■ <b>University of Colorado:</b> Establishing resident panels                                       | Page 5  |
| ■ <b>Kaiser Permanente Washington:</b> Leveraging a unique schedule to maximize resident panel size | Page 6  |
| ■ <b>Tufts-Cambridge Health Alliance:</b> Monitoring panels   | Page 9  |
| ■ <b>University of Chicago:</b> Transferring panels when residents graduate                         | Page 11 |

### Appendices/ tools

- |  |         |
|--|---------|
| ■ <b>Ideal panel size calculations</b><br>(Strategy 2 & 3)                         | Page 12 |
| ■ <b>Example empanelment tracking tables</b><br>(Strategy 3)                       | Page 13 |
| ■ <b>Letter for transferring patients of graduating residents.</b><br>(Strategy 4) | Page 14 |
| ■ <b>Works cited and suggested reading</b>   | Page 15 |

## Strategies for Empanelment

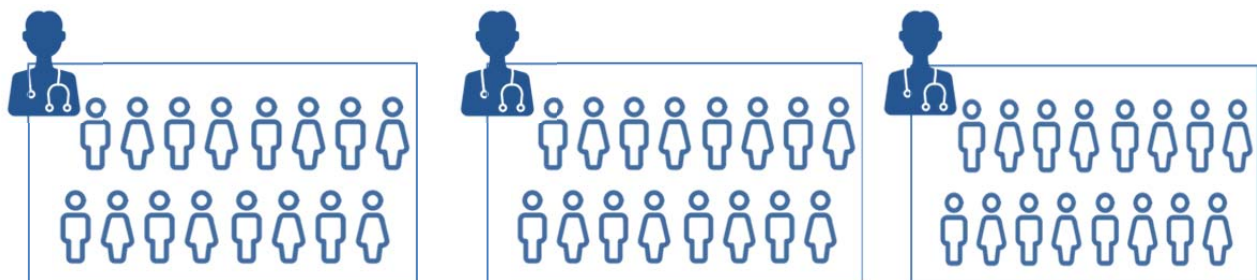
### 1. Make the case. Why empanelment is important.

#### Why is it important to empanel patients?

- **Empanelment is a prerequisite for continuity of care.** Perfect continuity of care means that all patients in a clinician's panel always see that clinician. Without empanelment, a practice cannot begin to measure or improve continuity.
- **Empanelment allows practices to balance the workload among clinicians and teams.** Empanelment enables the practice to determine whether each clinician and team has a reasonable balance between patient demand for care and the capacity to provide that care.
- **Defined panels provide a denominator for performance measures at the clinician and team level.** For example, if a clinician's panel includes 200 patients with diabetes and 50 of those patients have A1c greater than 9, then 25% of that clinician's diabetic patients are in poor control and the clinician's team can find out which patients they are and can intensify their care. Without empanelment, clinicians would not know their diabetes performance nor which patients need additional services.

#### Why is it important to empanel patients in a residency clinic?

- **Empanelment provides residents a sense of ownership for a group of patients.** When residents own a panel of patients, they are more likely to follow through to ensure their patients receive necessary care.
- **The clinic is the curriculum.** Experiences in residency clinics should model best practices for post-residency work as a primary care clinician.



## 2. Assign patient panels. How to get started.

### How do I start empaneling patients?

Retrieve a list of all patients in the electronic medical record. Apply an algorithm like Mark Murray's Four-Cut Method (see right) to link the patients with a clinician.

After creating a preliminary assignments list, check with clinicians to see if they agree. This step will lead to some juggling of panels. Discuss with clinicians individually as needed to determine the optimal pairing for patients that providers know. From this step you will have a working panel list.

After agreeing on a working panel list, the front desk or other designated team member should confirm when patients call or come for appointments that the patient primary panel assignment in the electronic health record is correct.

For residency practices, it is especially important to maintain accurate lists and make updates each year. More detail about transferring patients for graduating residents is described below.

### Should patients be empaneled to residents?

Health system policies such as billing concerns may influence whether a resident or attending physician is listed as the primary care clinician. Our observation is that resident education and patient care is reinforced when patients are empaneled to residents.

If billing or other health system requirements restrict practices from listing residents as the primary care clinician, practices can often use a secondary field in the electronic health record to indicate empanelment assignments for the purpose of clinical operations and population health management.

Alternatively, a practice may be able to work with their billing department to create a workflow to identify the billing provider separately from the listed primary care clinician. For example, a subgroup of residents may all be linked to one attending clinician for billing purposes, with residents still listed as the primary care clinician.

### Mark Murray's "Four-Cut Method" for assigning patient panels

1. Patients who have seen only one provider for all visits are assigned to that provider.
2. Patients who have seen more than one provider are assigned to the provider they have seen most often.
3. The remaining patients who have seen multiple providers the same number of times are assigned to the provider who performed their most recent physical or health check.
4. The remaining patients who have seen multiple providers the same number of times, but have not had a routine physical exam, are assigned to the provider they saw last. (Alternatively, allow clinical teams to talk through this list of patients and determine where they belong.)

# Transforming Teaching Practices

## *Empanelment Toolkit*

### Should patients be empaneled to nurse practitioners, and physician assistants?

It is also ideal that patients are empaneled to the nurse practitioner or physician assistant if that person is acting as the primary care clinician (rather than a continuity anchor or acute care only provider).

### How long should patients remain on panels?

The conventional look-back period to keep patients empaneled ranges from 18 to 36 months since last primary care visit, with 24 months a common time frame.

	Advantages	Disadvantages
<b>Shorter Panel</b> <i>(ex- 18 months)</i>	Patients are more likely to be current patients, yielding more accurate population management data.	May drop patients who are still part of the practice but have not been recently seen.
<b>Longer Panel</b> <i>(ex- 36 months)</i>	Patient list is more comprehensive.	Patients who no longer come to the practice are more likely to be included, yielding less accurate population management data.

It is also important to have established workflows to maintain panels in the electronic health record and remove patients who have moved, died, or transferred to another primary care practice.

### **CASE HIGHLIGHT: How does University of Colorado establish resident panels?**

The resident teaching clinic, AF Williams Family Health Center, has empaneled more than 90% of its 16,500 patients to a primary care clinician. Patients who have not been seen for 36 months are dropped from panels. Patients are empaneled to both faculty physicians and residents. R1s are assigned panels with a variety of medical diagnoses and patient ages to ensure a breadth of learning opportunities. Target resident-panel sizes are 75 patients per R1; 200 per R2; and 400 per R3. The empanelment process never stops. The medical director and practice manager review empanelment reports as a leadership dyad quarterly. Panels are then opened and closed as panel sizes change due to growth or attrition. If a provider is less than 80% full, they can see 3 new patients per 4-hour session; between 80-93% full, they can see 1 new patient per session; and if >93% full, they are closed to new patients.

### 3. Actively monitor patient panels. Maintain an ongoing process.

#### What is the optimal panel size?

There is no standard panel size for a full-time clinician. Panel sizes across organizations and primary care specialties can range from 1,250 to 3,000 patients per clinician (Kivlahan et al, 2017). Several factors shape panel size including number of patients seen per day, a clinician's clinical FTE, care team support models, and patient complexity / average number of visits per patient per year. See further detail below about approaches to calculating target panel sizes.

The table below summarizes a variety of panel size estimates shared from our visits with transforming teaching practices throughout the United States.

Site	Program Type	R1 Panel	R2 Panel	R3 Panel
A	Family Med	7-36	150-328	138-399
B	Family Med	136	382	392
C	Family Med	75	200	300
D	Family Med	42	360	462
E	Family Med	34	170	270
F	Family Med	91	156	166
G	Family Med	200	400	600
H	Internal Med	Missing	100-140	100-140
I	Internal Med	50	91	126
J	Internal Med	40	60	80

#### CASE HIGHLIGHT: How does Kaiser Permanente Washington leverage a unique scheduling structure to maximize resident panel size?

Residents at the Kaiser Washington Family Medicine program care for panels of 400-500 patients from day one. To make this possible, R1s are scheduled in clinic 4-5 half days a week, more frequently than R2s (3-4 half days a week), and R3s (2-3 half days a week). This structure is designed to provide continuous access to larger patient panels and gives residents intensive primary care training at the beginning of residency, maximizing the experience of providing continuity care for patients over all three years of residency.

# Transforming Teaching Practices

## *Empanelment Toolkit*

### How do I calculate target panel sizes and determine if a clinician is under- or over-empaneled? (He or she has too few or too many patients).

Several strategies can help you evaluate whether clinicians have an appropriate number of patients in their panel on their panel, including:

- **Calculate ideal panel size based on supply and demand.** (See appendix 1). Compare calculated ideal panel size with the actual panel size for each clinician.
- **Compare panel sizes across clinicians in your practice.** Divide the entire practice panel by the number of full-time equivalent (FTE) clinical providers. For providers (including residents) who work part time, calculate their contribution based on the percentage of FTE spent on clinical work. For example, a practice may have a target of 200 patients per half-day clinic session worked. A clinician working 5 half-days would have a target panel of 1000; a clinician working 3 half days would have a target panel of 600.
- **Conduct a “rapid test”** with help from front office or call center staff (see Erie Family Health Center description, right).

#### **The over-empanelment “rapid test” (Erie Family Health Center)**

EFHC recently tried a “rapid test” to gauge over-empanelment. They asked their call center staff to identify the providers for which “you panic when one of their patients calls because you know you won’t be able to find an appointment for them.” The “panic” test was actually quite accurate in identifying providers who had a low proportion of appointments not filled, high productivity, and a high rate of “call backs” (patients being asked to call back because there were no available appointments), suggesting that it was at least a good quick test of access issues resulting from potential over-

### What do I do if some clinicians are over-empaneled or under-empaneled?

It is likely that some clinicians will have larger panels than others. One first step is to close the panels of “over-empaneled” clinicians to new patients. However, it can take time to fully level the panels without interrupting important relationships between patients and their primary care clinicians.

Other tactics used by practices to level panel sizes include encouraging other clinicians, particularly under-empaneled residents, to invite patients of the over-empaneled clinician to switch their primary care clinician. It can also help to engage the over-empaneled clinician in identifying people who are relatively new and may be open to being moved.

Template and patient appointment scheduling workflows can be adjusted such that over-empaneled clinicians only have follow-up patient visits and are not scheduled for new patient

# Transforming Teaching Practices

## *Empanelment Toolkit*

visits. For under-empaneled patients, clinic templates should include new patient appointments to create supply to expand panel sizes to target. One practice, for example, monitors provider panel sizes quarterly and adjusts the clinic templates that are opened accordingly:

<b>% of target panel size</b>	<b>Appointment slots</b>
Above 100%	Only follow-up appointment types
80-99%	2 new patient appointments per half-day session
60-79%	4 new patient appointments per half-day session
Less than 60%	Half of template as new patient appointments

The number of new and follow-up appointments slots in each template takes into account whether the clinician is faculty, R1, R2, or R3.

### Are panels risk-adjusted for patient complexity?

A panel of 2000 people who are mostly young and healthy requires far less work than a panel of 2000 people who are elderly and in poor health. However, many practices do not risk adjust their panels, and accurate panels are helpful even if they are not yet risk adjusted.

There are many risk-adjustment algorithms available, both as products within specific electronic health record platforms and other proprietary models that can be utilized. A practice attempting to risk adjust panels for the first time might consider adjusting simply based on age. More complex methods include comorbidities, social determinants of health, utilization patterns, and other predictive analytics. If a practice is using risk-adjustment to determine target panel sizes, the same methods described above can be utilized to monitor and move providers towards achieving their target panel sizes.

### Who should be responsible for empaneling the practice and keeping track of changes?

Keeping track of changes such as clinicians leaving, clinicians practicing part-time, new clinicians coming, patients coming and leaving, etc. is a big job and does not stop when the initial empanelment list is done. This is generally the job of the practice manager or a dedicated panel manager in consultation with the medical director or clinic management team.

To keep panels clean, it is important to run regular reports to monitor panel sizes and identify patients who are regularly seeing people other than their primary care clinician and who may need to be moved. Residents should be involved in regularly reviewing their list of assigned patients. It can also be helpful to create standard work that is not clinician dependent to confirm and enter primary care clinician assignment when a patient is seen by staff members (clerical or medical assistants).



### **CASE HIGHLIGHT: How are panels monitored at Tufts-Cambridge Health Alliance?**

All patients at the Malden resident teaching clinic are empaneled to an attending physician or resident but not to physician assistants (PAs). PAs are chiefly used to see patients of their team's physicians who are not in clinic that day. The practice manager reviews the empanelment process on a weekly basis, allowing work to be fairly distributed among physicians and ensuring that denominators for performance measures are accurate. Panels are not risk-adjusted, but high-utilizing patients are tracked to distribute them fairly, thereby preventing a few physicians from having too many complex patients. The panel-size target is about 1,425 patients per 1.0 FTE faculty physician, adjusted for the percent FTE the physician works. Panels may be increased if the physician is directly supported by a PA. The compensation formula for physicians rewards higher panel size. R1s have 50 patients on their panels, and R2s and R3s have 400. Data about actual and ideal panel size are tracked and distributed quarterly to each provider (including residents) and team. An attempt is made to equalize the panels of the teams. Patients are dropped from panels if they have not attended the clinic in 24 months. If panels are too large, physicians can request that their panels be closed.

### 4. Transfer panels when residents graduate. Ensure patients do not get lost in the shuffle.

#### What are some best practices for patient empanelment when residents graduate?

Keep patients of graduating residents within the team, assigning them to an R1 or R2 who ideally will have opportunities to communicate with the graduating resident, especially for warm handoffs for complex patients. Have graduating residents review their panel to identify patients that are particularly high risk.

Instill a process for graduating residents to do the following for high-risk patients. At the McGaw Northwestern Family Medicine Residency, Erie Family Health Center Humboldt Park, suggested timeframes and steps include:

Timeframe	Transfer Step
February	R3 patient panels are closed
March	R3s begin to inform patients that their patient care will be transferred to another PCP.
April	Send patients a letter to alert them that their primary care clinician will be changing (see appendix 3).
April - June	Residents document summary of care plan and active issues to be followed-up upon transfer. Begin transfer process including: <ul style="list-style-type: none"> <li>a. Identify high-risk patients that need pro-active outreach to ensure a new primary care provider transfer visit is scheduled within the first couple months after graduation or the ideal interval for transfer visit for less high-risk patients</li> <li>b. Identify patients that have a specific relationship with another provider to whom to transfer them or who would benefit from an attending provider</li> <li>c. Provide time for graduating residents to give warm handoffs or sign out to the inheriting primary provider for the high-risk patients.</li> </ul>
July- August	New R3s cover graduating residents' messages and review labs and results.
September	Involve the empanelment manager to outreach and make appointments 3-6 months after panel transfer and to track patients who are lost to follow-up, particularly for high-risk patients.

### How should residents be involved in patient empanelment transitions?

Engage residents in the process of reviewing their panel prior to graduation and ask residents to identify the patients that they are most concerned will fall through the cracks so that they can provide more detailed notes on their needs and introduce the patient to their new clinician. Also, prepare information for the graduating resident to share with their patients about their new assigned clinician.

### **CASE HIGHLIGHT: How are resident panels transferred at University of Chicago?**

The University of Chicago internal medicine residency program has developed a robust resident clinic transfer process for graduating residents, described in several publications listed below. Starting in 2011, the clinic formalized a handoff protocol including a standardized sign-out process, resident education, improved scheduling, automatic missed visit rescheduling, safety audits, and time for residents to call new patients to establish care via telephone visits. Each year, graduating residents are instructed to select high-risk patients on their panels based on complex problems, frequent hospitalizations, missed visits, or challenging social situations. The graduating residents actively sign out these high risk patients to a rising 2<sup>nd</sup> year resident in June. Patients are sent a new patient transition packet, which includes a departure letter notifying them their physician is leaving, a welcome letter from the new physician, a patient appreciation certificate for being an educator of residents, a patient visit preparation tool, and a pamphlet with helpful information about clinic services and processes. Safety audits are performed 3 months after the handoff for the purpose of finding patients who still need an appointment with a new provider. An evaluation of the outcomes of this transfer process found significant improvements in patient safety: there were more verbal handoffs between residents, greater ownership of patients, fewer patients lost to follow-up, more patients seeing the correct new PCP, more tests being followed up appropriately, and lower acute care utilization. Further details are described in the references listed in the appendix.

### Appendix 1: Ideal Panel Size Calculation

Determine the ideal panel size for a provider in your practice by quantifying current supply and demand:

$$\text{Ideal panel size} = \frac{(\text{C. \# clinic sessions/year}) * (\text{B. \# patients seen/clinic session})}{(\text{A. \# visits/patient/ year})}$$

- Calculate the **number of visits per patient per year**. Divide the number of unique patients seen in the last 12 or 18 months into the number of visits to the practice these patients generated within the same period. For example, at Clinic A, 50,000 patients generated 175,000 patient visits during a one-year period. Therefore, the average number of visits per patient at Clinic A was 3.5 for that 12-month period.
- Calculate the **number of patients seen per session**. Use historical data to determine the average number of visits by the average provider type are actually occurring each clinic session per provider (not how many slots are assigned to each provider). This can be done for each type of provider such as faculty, R1, R2, R3, nurse practitioners, etc. For example, the average number of patients seen per clinic session for faculty may be 10 while for R1's the average may be 4.
- Calculate the **number of provider sessions per year**. Determining the average number of clinic sessions devoted to patient visits each year for each provider type, as compared to other work. For example, a faculty member who has 3 half-day clinic sessions per week would have 144 sessions per year (accounting for 4 weeks of vacation per year), while R1s may have an average of 40 clinic sessions in a year.

#### Examples:

- A practice has an average of 3.5 visits per patient per year (A) and an average of 10 patients seen during faculty clinic sessions (B). What is the ideal panel size for a faculty member with 3 clinic sessions per week (144 sessions per year) (C)?

$$\text{Ideal panel size for this faculty member} = [144 * 10] / 3.5 = 411 \text{ patients}$$

- R1s in the same practice as above (A) see an average of 4 patients per clinic session (B) and have an average 40 clinic sessions per year (C). What is the ideal R1 panel size?

$$\text{Ideal panel size for this R1} = [40 * 4] / 3.5 = 46 \text{ patients}$$

# Transforming Teaching Practices

## Empanelment Toolkit

### Appendix 2: Example empanelment tracking tables

Site	PCP Name	Panel Member Count	Visit Weight Factor	Predicted Annual Avg. Visits	Adjusted Panel Count	Projected Annual Visits
<b>PGY1</b>						
Site 1	P	15	1.19	2.13	18	32
Site 1	R	7	0.97	1.71	7	12
Site 1	Y	14	1.39	2.50	19	35
Site 1	A	36	1.19	2.17	43	78
Site 1	D	20	1.05	1.90	21	38
Site 1	R	20	1.18	2.10	24	42
Site 1	S	11	1.23	2.18	13	24
<b>PGY2</b>						
Site 1	C	263	0.88	1.58	231	416
Site 1	D	155	0.95	1.72	147	266
Site 1	A	171	0.99	1.80	170	307
Site 1	C	264	0.94	1.70	249	449

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
	Availability	PCP Name	PCP Type	FTE	Target Panel Size	Current Panel	# Needed for full	Continuity % Goal: 70% FP & Ped 90% IM	Tally						
1															
2			YR1	n/a	50	35	15	30%						Closed	
3			YR1	n/a	50	52	over	78%						Filling	within 10%
4			YR1	n/a	50	29	21	29%						Open	
5			YR1	n/a	50	29	21	50%							
6			YR1	n/a	50	18	32	17%							
7			YR1	n/a	50	18	32	33%							
8			YR1	n/a	50	40	10	50%							
9			YR1	n/a	50	20	30	37%							
10			YR1	n/a	50	24	26	38%							
11			YR1	n/a	50	42	8	-							
12			YR2	n/a	150	160	over	39%							
13			YR2	n/a	150	195	over	60%							
14			YR2	n/a	150	212	over	66%							
15			YR2	n/a	150	150	0	44%							
16			YR2	n/a	150	186	over	26%							
17			YR2	n/a	150	181	over	47%							
18			YR2	n/a	150	164	over	54%							
19			YR2	n/a	150	145	5	42%							
20			YR2	n/a	150	150	0	-							
21			YR2	n/a	150	136	14	45%							
22			YR3	n/a	300	262	38	29%							
23			YR3	n/a	300	301	over	50%							
24			YR3	n/a	300	213	87	42%							
25			YR3	n/a	300	286	14	46%							
26			YR3	n/a	300	262	38	50%							
27			YR3	n/a	300	246	54	16%							
28			YR3	n/a	300	310	over	39%							
29			YR3	n/a	300	260	40	-							
30			YR3	n/a	300	253	47	52%							
31			YR3	n/a	300	275	25	46%							
32			FP	0.2	260	373	over	61%							
33			FP	0.4	520	466	54	67%							



# Transforming Teaching Practices

## *Empanelment Toolkit*

### Appendix 3: Sample Patient Transfer Letter

***Letter shared courtesy of McGaw Northwestern Family Medicine Residency, Erie Family Health Center Humboldt Park***

Dear \_\_\_\_\_,

This letter is to inform you that the provider on your team, Dr. \_\_\_\_\_, has successfully completed their three year residency training program as a Family Physician at Erie Family Health. They will be moving on to the next phase of their careers in Family Medicine. Unfortunately this means they will no longer be seeing patients at Erie Family Health as of June 30, 20XX.

At Erie Family Health Center, we value the relationship you have with your primary care provider and healthcare team. Your healthcare team of nurses, medical assistants, behavioral health consultants, and health educators will be here to continue providing you with comprehensive healthcare. We will also be connecting you to a provider who has been on Dr. \_\_\_\_\_'s team so that your care will be with the same group.

Please let us know if you have any questions or concerns about this transition of your healthcare. We would also encourage you to make an appointment with your current doctor before June 30th, 20XX, if you have specific concerns or would like to discuss this transition in more detail.

Sincerely,

\_\_\_\_\_, (MD or DO)  
Erie Family Health Center

Health Care Team Members:

## Appendix 4: Works Cited and Suggested Readings

### On panel sizes

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## *Empanelment Toolkit*

### Toolkit Produced by

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