Section 1. Introduction

Mission
The mission of El Dorado Community Health Centers is to improve the health of our community through quality healing and preventive services.

El Dorado Community Health Centers (EDCHC) is a Federally Qualified Health Center located in El Dorado County, California. EDCHC provides quality, comprehensive health care to county residents, regardless of ability to pay. Services offered include primary care, dental, pharmacy, integrated behavioral health, opioid addiction treatment, complex care management, immunizations, health coverage enrollment and preventive health services. The Center's focus is to provide exceptional health care to patients at every stage of life.

Purpose & Scope
Consistent with its mission, El Dorado Community Health Centers strives to enhance patient health and ensure services are provided in a safe, patient-centered, timely, equitable and efficient manner:

Safe — Services provided incorporate evidence based, effective practices and risks to patients, providers, staff and others are eliminated or minimized.

Patient Centered — Services are responsive to individual patient needs and preferences and patients have the opportunity to participate in their health care decisions.

Timely — Services are provided in a timely manner.

Efficient — Procedures, treatments and services are conducted efficiently with appropriate coordination and continuity across all services.

Equitable — Care provided is standard in both quality and access and care does not vary based upon any personal patient characteristics or biases.

The above is accomplished through review of care quality, patient outcomes, peer chart review, patient experience and adherence to quality and compliance guidelines outlined by the Bureau of Primary Health Care and the National Committee for Quality Assurance.

The Quality Improvement (QI) Plan serves as the foundation of El Dorado Community Health Centers’ commitment to continuously improve the quality of care and services provided. It helps guide the development, implementation, monitoring and evaluation of clinical and department efforts that aim to improve patient outcomes and enhance the patient experience while maintaining the confidentiality of patient records.
Quality improvement is an important component of El Dorado Community Health Centers’ performance management, in which data is used for decision-making and quality improvement tools and methods are applied to ensure adequate progress is made towards clinical and operational goals.

**Quality Improvement Principles**
Quality improvement is a systematic approach to assessing services and improving them on a priority basis. El Dorado Community Health Centers (EDCHC) approach to quality improvement is based on the following principles:

*Customer Focus.* We focus on both internal and external customers and on meeting or exceeding needs and expectations.

*Recovery-oriented.* Services are characterized by a commitment to promoting and preserving wellness and to expanding choice. This approach promotes maximum flexibility and choice to meet individually defined goals and to permit patient-centered services.

*Employee Empowerment.* Everyone has a role in quality and we involve staff at all levels of the organization in quality improvement activities.

*Leadership Involvement.* Strong leadership, direction and support of quality improvement activities by the governing body and Executive Director are key to performance improvement. This involvement of organizational leadership assures that quality improvement initiatives are consistent with both mission and strategic plan.

*Data Informed Practice.* Successful QI processes create feedback loops, using data to inform practice and measure results. Fact-based decisions are likely to be correct decisions.

*Statistical Tools.* For continuous improvement of care, tools and methods are needed that foster knowledge and understanding. Continuous quality improvement organizations use a defined set of analytic tools in order to turn data into information.

*Prevention Before Correction.* Continuous quality improvement entities seek to design good processes to achieve excellent outcomes rather than fix processes after the fact.

*Continuous Improvement.* Processes must be continually reviewed and improved. Small incremental changes make an impact and staff can usually find an opportunity to make process improvements that are manageable.

**Continuous Quality Improvement Activities**
Quality improvement activities emerge from a systematic and organized framework for improvement. This framework is understood, accepted and utilized by staff throughout the organization. Quality improvement involves two primary activities:

1) Measure and assess the performance of EDCHC services through the collection and analysis of data.
2) Conduct quality improvement initiatives, take action where indicated, and evaluate the effectiveness of the initiatives and actions.

Examples of tools used to conduct and measure quality improvement are described in Appendix A.

Section 2. Leadership & Organization

Board of Directors
El Dorado Community Health Centers' Board of Directors meets monthly and has overall responsibility to evaluate the performance of the health center and ensure health care services provided are accessible and meet quality and safety standards. The Board of Directors provides leadership for the quality improvement process by reviewing, evaluating and approving the Quality Improvement Plan annually. In addition, the Board of Directors reviews and approves Quality Improvement/Risk Management policies as outlined in the Bureau of Primary Health Care’s Health Center Program Compliance Manual.

Quality Assurance Committee
The Board of Directors meets its quality oversight responsibility through the Board Committee known as the Quality Assurance Committee (QAC). The QAC provides leadership for care quality and patient safety at El Dorado Community Health Centers (EDCHC) and ensures the Center’s quality improvement efforts address the quality of EDCHC services, patient satisfaction and patient grievance processes, patient and staff safety, and adverse events. The committee meets at least quarterly and not less than four (4) times per year and consists of the following individuals:

- Board Members (Committee Chair and at least 2 additional members)
- Chief Executive Officer
- Medical Director/Associate Medical Director
- Chief Operations Officer/Assistant Clinical Director
- Quality Improvement Manager
- Executive Administrative Assistant (Meeting minutes/documentation)

The responsibilities of the Quality Assurance Committee include:

- Reviewing and approving the annual Quality Improvement (QI) Plan.
- Monitoring QI Plan goals and indicators of care quality and patient safety.
- Periodically assessing objectives and reviewing actions taken by the Quality Improvement Committee (QIC) to address barriers to goals and objectives.
- Reporting to the Board of Directors on care quality and patient safety on a regular basis.

Quality Improvement Committee (QIC)
The Quality Improvement Committee provides ongoing operational leadership for care quality, patient safety, and confidentiality of patient records at EDCHC. The committee meets monthly and consists of the following individuals:

- Chief Executive Officer
- Medical Director/Associate Medical Director
Chief Operations Officer/Assistant Clinical Director
Behavioral Health Director
Quality Improvement Manager
Health Information Technology Manager
Development Director (as needed)
Chief Finance Officer (as needed)
Dental Representative (as needed)
Front Office Manager (as needed)
Executive Administrative Assistant (Meeting minutesDOCUMENTATION)

The Quality Improvement Committee (QIC) addresses all health center operational issues that relate to care quality, patient safety and confidentiality of patient records. The QIC is responsible for establishing goals and overseeing the implementation of objectives and activities related to care quality and patient safety throughout the organization.

The Quality Improvement Committee (QIC) identifies annual care quality and patient safety measures and sets goals and specific objectives to be accomplished each year. Specific responsibilities of the QIC are:

- Select and prioritize care quality and patient safety goals and indicators to monitor;
- Develop the annual Quality Improvement Plan;
- Assess goals and indicators, and taking action through quality improvement activities;
- Establish and support specific quality improvement activities;
- Include quality/performance improvement activities that are based on information from patients, staff and community stakeholders via the grievance and complaint process and patient satisfaction studies;
- Use standard practices to assess and conduct quality improvement (such as Plan-Do-Study-Act cycles);
- Coordinate quality improvement activities and documentation required by contract obligations and NCQA standards;
- Communicate quality improvement activities and results to staff, patients and other stakeholders as a means to engage and build a culture of quality

Examples include:
  a. Message boards and/or posters displayed in common areas;
  b. QIC reporting during the organization’s provider, staff, and leadership meetings;
  c. QIC reporting to various stakeholder groups;
  d. Sharing of the annual Quality Improvement Plan;
  e. Evaluate the annual QI Plan based on identified goals and quality indicators;
  f. Report to the QAC on quality improvement activities of the organization on a quarterly basis.

Section 3. Quality Improvement Goals

Goals & Objectives
The following are the ongoing long-term goals for El Dorado Community Health Centers' Quality Improvement Program and the specific objectives for accomplishing these goals for the year 2020.

- To implement quantitative measurements to assess care quality and patient safety;
• To bring leadership, managers and staff together to review quantitative data for care quality, patient safety and adverse events;

• To carefully prioritize care quality and patient safety needs and set goals for their resolution;

• To achieve measurable improvement in the highest priority areas;

• To meet internal and external reporting requirements;

• To develop or adopt necessary tools, such as policies, procedures, patient satisfaction/experience surveys and quality indicators to ensure continuous quality improvement.

Patient Safety
El Dorado Community Health Centers’ (EDCHC) monitors health care services to improve patient safety, reduce risk and provide a safe environment. Recognizing that effective medical/health care error reduction requires an integrated and coordinated approach, EDCCHC employs a systematic methodology to minimize physical injury and accidents. Patient safety is the responsibility of all staff members and serious breaches are reported to the Quality Assurance Committee (QAC). Organization-wide safety includes activities that contribute to the maintenance and improvement of patient safety. The following are engaged to monitor patient safety:

Incident Reports: Collect and trend data (quarterly) to monitor quality and safety.

Equipment Maintenance: EDCCHC has processes in place to ensure equipment is maintained.

Patient Concerns/Grievances: Collected, addressed and trended quarterly to monitor quality and safety.

Training: EDCCHC has a process for ensuring that staff receive regular training in order to remain professionally competent.

Peer Chart Review: EDCCHC has a formal process for providers to review/audit randomly selected charts to ensure care rendered is appropriate and safe.

Patient Satisfaction Surveys: EDCCHC employs the use of the Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey developed by the Agency for Healthcare Research and Quality (AHRQ) to standardize questions about patient experience. CAHPS survey questions ask patients to share their experience on a range of services and at different points in the care delivery process. The CAHPS survey is available to patients on the El Dorado Community Health Centers website and is accessible at any time. The EDCCHC Marketing and Outreach Department is responsible for the administration of the survey, as well as data collection, interpretation and reporting.
2020 Quality Improvement Goals

EDCHC Board of Directors approved a Quality Improvement (QI) Manager position in 2017. This position aligns with the Bureau of Primary Health Care’s Health Center Program Compliance Manual. Working with key management staff, the QI Manager is responsible for ensuring the implementation and updating of QI operating procedures and related assessments and monitoring QI outcomes. The QI Manager works with the Quality Improvement Committee to set annual quality improvement goals.

### 2020 Quality Improvement Goals

<table>
<thead>
<tr>
<th>Quality Improvement Goal</th>
<th>Work Begins</th>
<th>Work Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development, review and Board approval of 2020 QI Plan</td>
<td>December 2019</td>
<td>January 2020</td>
</tr>
<tr>
<td>Identify electronic system (MedTrainer) for incident reporting and patient grievances, if possible, in order to centralize and better track incidents and ensure timely response and closure.</td>
<td>December 2019</td>
<td>February 2020</td>
</tr>
<tr>
<td>Implement a data analytics/visualization tool (Tableau) and work with data analytics consultant (Grazitti) to create data warehouse to pilot diabetes dashboard. (HRSA Grant Funded)</td>
<td>January 2020</td>
<td>March 2020</td>
</tr>
<tr>
<td>Identify and implement enhancements to referral, labs &amp; DI follow-up workflows and create guidelines for Medical Assistants and other clinical staff to provide assistance to prevent backlogs.</td>
<td>February 2020</td>
<td>May 2020</td>
</tr>
<tr>
<td>Develop and implement incident reporting and patient grievance training to ensure appropriate use of incident and patient grievance reporting and follow-up.</td>
<td>February 2020</td>
<td>June 2020</td>
</tr>
<tr>
<td>Renew Patient Centered Medical Home (PCMH) Recognition for all sites.</td>
<td>February 2020</td>
<td>July 2020</td>
</tr>
<tr>
<td>Seek California Health &amp; Wellness grant funding to support population health management staff and create workflows to establish proactive monthly reporting process for key UDS &amp; HEDIS clinical measures for outreach/patient scheduling.</td>
<td>March 2020</td>
<td>August 2020</td>
</tr>
<tr>
<td>Design, pilot and evaluate On Track By Two program focused on proactively tracking newborns and infants to ensure they receive all HEDIS and UDS required immunizations by two years of age.</td>
<td>March 2020</td>
<td>September 2020</td>
</tr>
</tbody>
</table>
Section 4. Performance Measurement

Performance measurement is the process of regularly assessing the results produced by the program. It involves identifying processes, systems and outcomes that are integral to the performance of the service delivery system. It also involves selecting appropriate measures for each of these areas and analyzing related data on a regular basis to identify improvement opportunities.

The Quality Improvement Committee (QIC) will review performance on HRSA Uniform Data System (UDS) measures, with measures reviewed biannually at minimum. The QIC may monitor additional measures based on relevance to the mission, strategic importance, contract requirements and clinical importance.

The purpose of measurement and assessment is to:

- Assess the stability of processes or outcomes to determine whether there is an undesirable degree of variation or a failure to perform at an expected level.
- Identify problems and opportunities to improve the performance of processes.
- Assess the outcome of the care provided.
• Assess whether a new or improved process meets performance expectations.

**Measurement and assessment involve:**

• Selection of a process or outcome to be measured, on a priority basis.
• Identification and/or development of performance indicators for the selected process or outcome to be measured.
• Aggregating data so that it is summarized and quantified to measure a process or outcome.
• Assessment of indicator performance at planned and at regular intervals.
• Acting to address performance discrepancies when a process is not stable, is not performing at an expected level or represents an opportunity for quality improvement.
• Reporting within the organization on findings, conclusions and actions taken as a result of performance assessment.

**Selection of a Performance Indicator**

A performance indicator is a quantitative tool that provides information about the performance of processes, services, functions or outcomes. Selection performance indicators is based on the following considerations:

• **Scientific Foundation:** the relationship between the indicator and the process, system or outcome being measured.

• **Validity:** whether the indicator assesses what it purports to assess.

• **Resource Availability:** the relationship of the results of the indicator to the cost involved and the staffing resources that are available.

• **Patient Preferences:** the extent to which the indicator takes into account individual or group (e.g., racial, ethnic, or cultural) preferences.

• **Meaningfulness:** whether the results of the indicator can be easily understood, the indicator measures a variable over which the program has some control, and the variable is likely to be changed by reasonable quality improvement efforts.

• **Relevance to mission:** whether the indicator addresses the mission and population served.

• **Risk:** whether the indicator address high volume, problem prone or high risk services or processes.

**Assessment**

Assessment is accomplished by comparing actual performance on an indicator with:

• Self over time
• Pre-established standards, goals or expected levels of performance
• Evidence-based practice
- Other Federally Qualified Health Centers (FQHCs), community clinics, or similar service providers

Clinical Performance Measures for 2020

The table below outlines the HEDIS and UDS clinical performance measures anticipated in 2020. Measures prioritized by the Quality Improvement Committee (QIC) will be reviewed at least quarterly during meetings with the goal of achieving improved performance.

QIC will offer consultation, training, facilitation and support to help drive improvement in these measures. QIC members may do the following during process improvement:

- Identify what is to be accomplished
- Use the Plan-Do-Study-Act methodology, where appropriate
- Document key steps of the process
- Report results to the QAC
- Share documents, tools, lessons learned, etc. with others in the organization

### HEDIS Clinical Measures - California Health & Wellness (CH&W)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Measurement Name</th>
<th>CHW 50th % Goal &amp; 2020</th>
<th>EDCHC 2019 % (Not final)</th>
<th>EDCHC 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMR</td>
<td>Asthma Medication Ratio</td>
<td>62.30%</td>
<td>97.37%</td>
<td>55.14%</td>
</tr>
<tr>
<td>BCS</td>
<td>Breast Cancer Screening (all clinics)</td>
<td>58.08%</td>
<td>52.19%</td>
<td>54.68%</td>
</tr>
<tr>
<td>CCS</td>
<td>Cervical Cancer Screening</td>
<td>60.10%</td>
<td>60.92%</td>
<td>57.48%</td>
</tr>
<tr>
<td>CBP</td>
<td>Controlling Blood Pressure</td>
<td>58.64%</td>
<td>42.83%</td>
<td>0.00%</td>
</tr>
<tr>
<td>CDC-1</td>
<td>HbA1c Testing</td>
<td>87.83%</td>
<td>85.34%</td>
<td>80.96%</td>
</tr>
<tr>
<td>CIS-3</td>
<td>Childhood Immunization Status</td>
<td>70.80%</td>
<td>58.33%</td>
<td>24.10%</td>
</tr>
<tr>
<td>W34</td>
<td>Well Child 3-6 Years</td>
<td>73.89%</td>
<td>73.05%</td>
<td>63.74%</td>
</tr>
<tr>
<td>IMA</td>
<td>Immunizations for Adolescents</td>
<td>31.87%</td>
<td>46.97%</td>
<td>32.60%</td>
</tr>
<tr>
<td>PPC-2</td>
<td>Prenatal Care</td>
<td>83.21%</td>
<td>89.72%</td>
<td>78.35%</td>
</tr>
<tr>
<td>PPC-3</td>
<td>Postpartum Care</td>
<td>65.21%</td>
<td>78.50%</td>
<td>58.76%</td>
</tr>
<tr>
<td>Measure</td>
<td>2019 Goal</td>
<td>2019 (Not final)</td>
<td>2018 UDS EDCHC</td>
<td>2018 UDS CA</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-----------</td>
<td>------------------</td>
<td>----------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Diabetes – Poor Glucose Control (A1c &gt;9%)</td>
<td>30%</td>
<td>30.86%</td>
<td>30.83%</td>
<td>35%</td>
</tr>
<tr>
<td>Controlling High Blood Pressure</td>
<td>75%</td>
<td>75.23%</td>
<td>75.31%</td>
<td>65.63%</td>
</tr>
<tr>
<td>Screening for Clinical Depression &amp; Follow Up</td>
<td>91%</td>
<td>91.67%</td>
<td>92.35%</td>
<td>69.37%</td>
</tr>
<tr>
<td>Colorectal Cancer Screening</td>
<td>37%</td>
<td>37.12%</td>
<td>37%</td>
<td>45.73%</td>
</tr>
<tr>
<td>Cervical Cancer Screening</td>
<td>61%</td>
<td>60.70%</td>
<td>56.67%</td>
<td>60.59%</td>
</tr>
<tr>
<td>Childhood Immunization Status</td>
<td>25%</td>
<td>21.87%</td>
<td>22.96%</td>
<td>39.21%</td>
</tr>
<tr>
<td>Dental Sealants</td>
<td>84%</td>
<td>90.43%</td>
<td>92.39%</td>
<td>54.37%</td>
</tr>
<tr>
<td>Use of Appropriate Meds for Asthma</td>
<td>76%</td>
<td>95.34%</td>
<td>94.26%</td>
<td>86.06%</td>
</tr>
<tr>
<td>Weight Assessment and Counseling Children</td>
<td>94%</td>
<td>94.38%</td>
<td>94.92%</td>
<td>69.86%</td>
</tr>
<tr>
<td>Adult BMI Screening</td>
<td>87%</td>
<td>89.15%</td>
<td>88.78%</td>
<td>71.78%</td>
</tr>
<tr>
<td>Tobacco Use</td>
<td>95%</td>
<td>94.81%</td>
<td>95.16%</td>
<td>89.84%</td>
</tr>
<tr>
<td>Coronary Artery Disease</td>
<td>78%</td>
<td>87.11%</td>
<td>86.07%</td>
<td>79.13%</td>
</tr>
<tr>
<td>Ischemic Vascular Disease</td>
<td>78%</td>
<td>81.79%</td>
<td>82.19%</td>
<td>80.88%</td>
</tr>
</tbody>
</table>
Section 5. Quality Improvement Initiative/PDSA

Once the performance of a selected process has been measured, assessed and analyzed, the information gathered by the above performance indicator(s) is used to identify a continuous quality improvement initiative to be undertaken. The decision to undertake the initiative is based upon El Dorado Community Health Centers’ (EDCHC) priorities. The purpose of an initiative is to improve the performance of existing services or to design new ones. The model utilized at EDCHC is a process improvement cycle called Plan-Do-Study-Act (PDSA).

Plan - The first step involves identifying preliminary opportunities for improvement. The focus is to analyze data to identify concerns and to determine anticipated outcomes. Ideas for improving processes are identified. This step requires the most time and effort. Affected staff or people served are identified, data compiled, and solutions proposed. (For tools used during the planning stage, see sections “a” thru “k” in APPENDIX: A)

Do - This step involves using the proposed solution, and if it proves successful, as determined through measuring and assessing, implementing the solution usually on a trial basis as a new part of the process.

Study - At this stage, data is again collected to compare the results of the new process with those of the previous one.

Act - This stage involves making the changes a routine part of the targeted activity. It also means “Acting” to involve others (other staff, program components or consumers) - those who will be affected by the changes, those whose cooperation is needed to implement the changes on a larger scale, and those who may benefit from what has been learned. Finally, it means documenting and reporting findings and follow up.

Section 6. Evaluation

An annual evaluation of the Quality Improvement Plan will be conducted by El Dorado Community Health Centers (EDCHC) and kept on file along with the annual Quality Improvement Plan.

The evaluation summarizes the goals of EDCHC’s annual Quality Improvement Plan, the quality improvement activities conducted during the past year, including the targeted process, systems and outcomes. It also includes the performance indicators utilized, the measurement findings, data aggregation and the quality improvement initiatives taken in response to the findings:

1. Summarize the progress towards meeting the annual QI plan goals.
2. For each of the goals, include a brief summary of progress.
3. Provide a brief summary of the findings for each of the indicators used during the year. These summaries should include both the outcomes of the measurement process and the conclusions and actions taken in response to these outcomes.

4. Summarize process improvement progress and provide a brief description of what activities took place including the results on indicators. Include next steps and how measurement gains will be sustained.

5. Recommendations: Based upon the evaluation, state recommendations for the next year as well as any actions necessary to improve the effectiveness of the annual QI Plan.
APPENDIX A. Quality Improvement Tools

Following are some of the tools available to assist in the quality improvement process.

a. **Flow Charting:** Use of a diagram in which graphic symbols depict the nature and flow of the steps in a process. This tool is particularly useful in the early stages of a project to help the team understand how the process currently works. The "as-is" flow chart may be compared to how the process is intended to work. At the end of the project, the team may want to then re-plot the modified process to show how the redefined process should occur.
The benefits of a flow chart are that it:

1) Is a pictorial representation that promotes understanding of the process
2) Is a potential training tool for employees
3) Clearly shows where problem areas and processes for improvement are

b. **Brainstorming:** A tool used by teams to bring out the ideas of each individual and present them in an orderly fashion to the rest of the team. Essential to brainstorming is to provide an environment free of criticism. Team members generate issues and agree to “defer judgement” on the relative value of each idea. Brainstorming is used when one wants to generate a large number of ideas about issues to tackle, possible causes, approaches to use, or actions to take. The advantages of brainstorming are that it:

1) Encourages creativity
2) Rapidly produces many ideas
3) Equalizes involvement by all team members
4) Fosters a sense of ownership in the final decision as all members actively participate
5) Provides input to other tools: “brain stormed” ideas can be put into an affinity diagram or they can be reduced by multi-voting.

c. **Decision-making Tools:** While not all decisions are made by teams, two tools can be helpful when teams need to make decisions.

1) Multi-voting is a group decision-making technique used to reduce a long list of items to a manageable number by means of a structured series of votes. The result is a short list identifying what is important to the team. Multi-voting is used to reduce a long list of ideas and assign priorities quickly with a high degree of team agreement.

2) The Nominal Group technique is used to identify and rank issues in order of priority.
d. **Affinity Diagram:** The Affinity Diagram is often used to group ideas generated by brainstorming. It is a tool that gathers large amounts of language data (ideas, issues, opinions) and organizes them into groupings based on their natural relationship. The affinity process is a good way to get people who work on a creative level to address difficult, confusing, unknown or disorganized issues. The affinity process is formalized in a graphic representation called an affinity diagram. This process is useful to:

1) Sift through large volumes of data.
2) Encourage new patterns of thinking.

As a rule of thumb, if less than 15 items of information have been identified, the affinity process is not needed.

e. **Cause and Effect Diagram (also called a fishbone or Ishakawa diagram):**
This is a tool that helps identify, sort, and display information. It is a graphic representation of the relationship between a given outcome and all the factors that influence the outcome. This tool helps to identify the basic root causes of a problem. The structure of the diagram helps team members think in a very systematic way. The benefits of a cause-and-effect diagram are that it:

1) Helps the team to determine the root causes of a problem or quality characteristic using a structured approach.
2) Encourages group participation and utilizes group knowledge of the process.
3) Uses an orderly, easy-to-read format to diagram cause-and-effect relationships.
4) Indicates possible causes of variation in a process.
5) Increases knowledge of the process.
6) Identifies areas where data should be collected for additional study.
f. **Histogram:** This is a vertical bar chart which depicts the distribution of a data set at a single point in time. A histogram facilitates the display of a large set of measurements presented in a table, showing where the majority of values fall in a measurement scale and the amount of variation. The histogram is used in the following situations:

1) To graphically represent a large data set by adding specification limits one can compare.
2) To process results and readily determine if a current process was able to produce positive results assist with decision-making.

**g. Pareto Chart:** Named after the Pareto Principle which indicates that 80% of the trouble comes from 20% of the problems. It is a series of bars on a graph, arranged in descending order of frequency. The height of each bar
reflects the frequency of an item. Pareto charts are useful throughout the performance improvement process - helping to identify which problems need further study, which causes to address first, and which are the “biggest problems.” Benefits and advantages include:

1) Focus on most important factors and help to build consensus.
2) Allows for allocation of limited resources.

The “Pareto Principle” says 20% of the source causes 80% of the problem. Pareto charts allow the team to graphically focus on the areas and issues where the greatest opportunities to improve performance exist.

h. **Root Cause Analysis:** A root cause analysis is a systematic process for identifying the most basic factors/causes that underlie variation in performance.

i. **Run Chart:** This is a basic tool to show how a process performs over time. Data points are plotted in temporal order on a line graph. Run charts are
most effectively used to assess and achieve process stability by graphically depicting signals of variation. A run chart can help to determine whether or not a process is stable, consistent, and predictable. Simple statistics such as median and range may also be displayed.

The run chart is most helpful in:

1) Understanding variation in process performance.
2) Monitoring process performance over time to detect signals of change.
3) Depicting how a process performed over time, including variation.

Run charts allows the team to see changes in performance over time. The diagram can include a trend line to identify possible changes in performance.

j. Control Chart: A control chart is a statistical tool used to distinguish between variation in a process resulting from common causes and variation resulting from special causes. It is noted that there is variation in every process. Some variation is the result of causes not normally present in the process (special cause variation). A common cause of variation is variation that results simply from the numerous, ever-present differences in the process. Control charts can help to maintain stability in a process by depicting when a process may be affected by special causes. The consistency of a process is usually characterized by showing if data fall within control
limits based on plus or minus specific standard deviations from the center line. Control charts are used to:

4) Monitor process variation over time.
5) Help to differentiate between special and common cause variation.
6) Assess the effectiveness of change on a process.
7) Illustrate how a process performed during a specific period.

Using upper control limits (UCLs) and lower control limits (LCLs) that are statistically computed, the team can identify statistically significant changes in performance. This information can be used to identify opportunities to improve performance or measure the effectiveness of a change in a process, procedure, or system.
**k. Bench Marking:** A benchmark is a point of reference by which something can be measured, compared, or judged. It can be an industry standard against which a program indicator is monitored and found to be above, below or comparable to the benchmark.
Signatures of Approval

[Signature]
2/7/2020
Chief Medical Officer
Date

[Signature]
1/28/2020
Chief Executive Officer
Date

[Signature]
Michael Chang
01/28/2020
Board of Directors Chairperson
Date