



# Using Dawn GF Module to Support Anemia Management

With

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## What DAWN does well

- Keeps track of all patients on EPO
  - When are labs due (or overdue)
  - When labs are available
  - Allows for distribution of work to providers
- Most patient information available on the DAWN face sheet
  - Patient preferred method of communication
  - Who to contact (patient or delegate)
  - Easy to view historical data

# DAWN Anemia Module



The screenshot displays the DAWN Clinical Framework 7.9 interface. At the top right, the date and version are shown: **Tue 10/02/2018** and **Version 7.9.63 (1335)**. A green arrow points to the **Anemia** module, which is highlighted in green in the navigation bar. The navigation bar also includes **Anticoagulation**. The main menu on the left lists several options:

- Patient view**: Add, edit or dose a patient
- List view / Daily routines**: Attendance and non-attendance
- Diary**: Consult the diary
- Message center**: Manage messages and pass messages by phone
- Reports**: Custom reports
- Settings**: Modify your personal settings
- Change Password**: Change your own login password

At the bottom, it states: **Current location for printing -No locations available-**. On the right side of the interface, there is a photograph of medical equipment including a stethoscope, a syringe, and a vial on top of an ECG strip.

# We work in List View

45 Dawn Clinical Software & Internet Applications. - Internet Explorer

Close all Tabs System Menu Patient Search Help

List view X

DAWN CLINICAL FRAMEWORK 7.9

### List view

R = referred to a colleague or team  
c = change of phase of treatment plan is due  
I = inactive phase of treatment plan  
! = flagged results  
overdue = results have not been received or dealt with in the expected timeframe  
(p) = letter sent previous to due date

With (Unfiltered)  
All (All patients)  
(All risk classes)  
All (All clinics)  
(Any date)

Worklist Non-attendance Patients Referrals Reminders EPO Messages My last viewed patients

102 records found.

Ref	Con	Time	Appointment	Flag	Hospital No	National No	Last name	First Name	Therapy	Last
c			09/27/2018						EPO: Monitoring...	(p) CB
c			09/28/2018						EPO: Monitoring...	(p) CB
			10/01/2018						EPO: Monitoring...	(p) CB
			10/01/2018						EPO: Monitoring...	(p) CB
c			10/01/2018						EPO: Monitoring...	(p) CB
c			10/01/2018						EPO: Monitoring...	(p) CB
c			10/01/2018						EPO: Monitoring...	(p) CB
c			10/01/2018						EPO: Monitoring...	(p) CB
c			10/01/2018 !						EPO: Monitoring...	(p) CB
c			10/01/2018 !						EPO: Monitoring...	(p) CB
c			10/01/2018						EPO: Monitoring...	(p) CB
c			10/01/2018						EPO: Monitoring...	(p) TIE

# List View Filters

## Result Filter

- 
- (Unfiltered)
  - Flagged results checked (past 7d)
  - New labs (7d before today)
  - New labs (14d before today)
  - New Labs Today (and some yesterday)
  - Closed (past 7 d)
  - Flagged and not referred or checked
  - Referred
  - Change of phase due
  - Missed Tests
  - Due for move to next appointment
  - Flagged results checked today
  - Test new labs (7before today)

## Clinic Filter

- (All clinics)
- \_BLUE (Kaiser Permanente)
- \_BLUE Anemia (Kaiser Permanente)
- \_GREEN (Kaiser Permanente)
- \_GREEN Anemia (Kaiser Permanente)
- \_YELLOW (Kaiser Permanente)
- \_YELLOW Anemia (Kaiser Permanente)
- ANEMIA (Kaiser Permanente)
- EWA (Kaiser Permanente)
- NEPHROLOGY (Kaiser Permanente)

# A typical EPO day

New labs (14d before today)

Worklist		Non-attendance		Patients		R	
<b>Filter</b> With New labs (14d before today)							
13 records found.							
Ref	Con	Time	Appointment	Flag			
C			09/27/2018				
C			10/01/2018				
C			10/01/2018				
C			10/01/2018!				
C			10/01/2018!				
C			10/01/2018!				
C			10/02/2018!				
			10/02/2018!				
C			10/03/2018				
		08:00:00 AM	10/08/2018!				
			10/08/2018				
			10/15/2018				
C			10/17/2018				

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Close all Tabs System Menu Patient Search Help Anticoagulation Anemia

List view Patient X

DAWN CLINICAL FRAMEWORK 7.

Test, Eugene - Male - 01/31/1935 - 02809649 - PO BOX 9812, RCG-D2W-04, RENTON

Interventions Contacts Letters Drugs Events Procedures Reviews Reminders Groups Documents

**Therapy: EPO, Phase: Weekly monitoring** Visit#: 6/12

Due by: 10/02/2018 X Type: (None selected) Add Results

Hemoglobin	
Hematocrit	
TSAT	
Ferritin	
Creatinine (serum)	
Erythropoietin	
Reticulocyte count	
Stool occult blood	

**Risk class** High

**Age** 83

**Diagnosis** Anemia/CKD (05/19/2014) ...

**Start date** 05/19/2014 - Indefinite

**Therapy** Anemia - EPO  
Weekly monitoring

**Ref. Range** Hgb 10.5-11.5

**Treatment Plan** 2 of 2 active

**Risks** age over 75

**Schedule** **Close**

Diary Note Review Referral

Not scheduled  
Schedule manually

\_BLUE Anemia (Kaiser Permanente)

Next date:  
 Use recommended: ⓘ  
 Set manually:

Normal interval: 1 week

Close all Tabs System Menu Patient Search Help Anticoagulation Anemia

List view Patient X

Test, Eugene - Male - 01/31/1935 - 02809649 - PO BOX 9812, RCG

4S Dawn Clinical Software & Internet Applications. - Internet Explorer

Close all Tabs System Menu Patient Search Help Anticoagulation Anemia

List view Patient X Treatment plans

DAWN CLINICAL FRAMEWORK 7.9

Risk class: High  
 Pref. clinic: BLUE Anemia (Kaiser Permanente)  
 Phone: [redacted] Primary - home  
 Age: Age

Diagnosis: Anemia/CKD (08/10/2011) ...  
 Start date: 06/03/2013 - Indefinite  
 Therapy: Anemia - EPO Monitoring (2w)  
 Ref. Range: (None selected)  
 Treatment Plan: 1 of 1 active  
 Risks: anemia

Interventions Contacts Letters Drugs Events Procedures Reviews Reminders Groups Documents

Therapy: EPO, Phase: Monitoring (2w) Visit#: 76/4

Due by: 10/10/2018 X Type: (None selected) Add Results

Height [input]  
 Weight [input]  
 Hemoglobin [input]  
 Hematocrit [input]  
 Pulse [input]  
 Systolic blood pressure [input]  
 Diastolic blood pressure [input]  
 TSAT [input]  
 Ferritin [input]

New Schedule Close  
 Diary Note Review Referral  
 Not scheduled  
 Schedule manually  
 BLUE Anemia (Kaiser Permanente)  
 Next date:  
 Use recommended: i  
 Set manually: [input]  
 Normal interval: 2 weeks

Graph History Personal Treatment plans Test Results Interface Warnings

Date	Ht	Wt	Hgb	Hct	Pulse	BPs	BPd	TSAT	Ferritin	Folate	B12	Scr	EPO	Retic	SOB	FE	TIBC
Details...																	
Details...																	
09/21/2018			9.50	27													
Details...			<														
Details...																	
09/10/2018			9.10	26													
Details...			<	<													
Details...																	
08/27/2018			9.10	27													
Details...			<														

EPO started 06/03/2013. (Showing results from up to 3 months before). \* Time not known. Please check order.

\*New Hgb target 9.5-11 2/15/18 per Dr Honari\*  
 NGT-EPO self-administer Wed female [redacted] \*\*SM\*\*  
 CKD3, Dr. Honari  
 HIPAA 12/16/14 ok all info on hm/cell & [redacted]  
 Using EPO 20,000 unit/ml vials-prefers small volume inj (1ml injection burts per pt)

Kaiser Permanente - So 09/24/2018 04:06:22 PM  
 Eunice

## Special Care Notes vs Quick Notes

What do I need to know every time?

- Who is the Referring provider
- For CKD, what is the stage (3 to 5)
- Special considerations for patient communication
- Office vs home injection
- Does the patient have a set day of the week for their injection

OLY-EPO office administered  
CKD4, Dr Mondress  
HIPAA 08/23/18 ok all info on cell only

\*\*\*SM -call only if a change is needed, otherwise send SM  
per request\*\*\*  
NGT-EPO in clinic Mon/Tue  
Hx MDS, Dr. Ancheta  
HIPAA 11/08/16 No vm on hm & all info ok to

# Labs Drop in directly from Lab Information System (LIS)

Interventions   Contacts   Letters   Drugs   Events

**Therapy: EPO, Phase: Monitoring (4w)**

Due by:    Type:

09/27/2018	Hemoglobin	11.30	✓
09/27/2018	Hematocrit	34	✓
	TSAT		
	Ferritin		
	Folate		
	Vitamin B12		
09/27/2018	Creatinine (serum)	0.80	✓
	Erythropoietin		
	Reticulocyte count		
	Stool occult blood		

# How to set the right 'Phase'

<b>Diagnosis</b>	Anemia/CKD (08/10/2011) ...
<b>Start date</b>	06/03/2013 - Indefinite
<b>Therapy</b>	Anemia - EPO Monitoring (2w)
<b>Ref. Range</b>	(None selected)
<b>Treatment Plan</b>	f 1 active
<b>Risks</b>	anemia



Disease area	PrimaryDiagnosis	Start date	Duration in we
Anemia	- Anemia/CKD (08/10/2011)	06/03/2013	

  

Disease area	Anemia
PrimaryDiagnosis	- Anemia/CKD (08/10/2011)
Therapy template	Anemia - EPO
Reference range	(None selected)
Start date	06/03/2013
Duration	Indefinite
Preferred clinic	_BLUE Anemia (Kaiser Permanente)
Preferred time	From [ ] until [ ]
Status	active <b>stop</b> <b>Admit</b>

  

Test Limit	<b>Phases</b>	Visits	Referral	Transport	Admission
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<b>Weekly monitoring - finished</b>		<b>ReActivate</b>
Period:	08/24/2011	
#Cycles implemented	2 / 12	
Visit based		
<b>Monitoring (2w) - active</b>		
Period:	03/09/2012	
#Cycles implemented	75 / 4	
Visit based		
<b>Monitoring (4w) - finished</b>		<b>ReActivate</b>
Period:	10/28/2011	
#Cycles implemented	89 / 50	
Visit based		

# Evaluation

No internal Dose Calculator in DAWN AC EPO module.

There is no place to enter the EPO dose into DAWN.

Details...	hh 9/21/18 Continue EPO 2,000 units SQ every 2 weeks, since 9/4/18. Lab: CBC every 2 weeks (on around 10/4/18), Fe/TIBC & Ferritin every 3 months (11/2018). Current iron supplementation: FES 325mg four times daily. Transfusion History: none Notes: Spoke with patient. Pt still gets tired easily from time to time		
09/20/2018	11.00	32	3.40
	 +13%		
Details...	gdt 9/17/18 Continue EPO 2,000 units SQ every 2 weeks, since 9/4/18. Lab: CBC every 2 weeks (on around 9/28/18), Fe/TIBC & Ferritin every 3 months (11/2018). Current iron supplementation: FES 325mg four times daily. Transfusion History: none Notes: spoke with patient		
09/14/2018	9.70	29	3.30
	<		
Details...	gdt 9/7/18 pt not contacted with lab ordered by provider; next CBC for EPO is on around 9/13		
09/06/2018	10.10	30	3.20
Details...	ja 8/31/18 Increase EPO to 2,000 units every TWO weeks starting 9/4/18. Lab: CBC every 2 weeks (Next on 9/13/18), Fe/TIBC & Ferritin every 3 months (Nov 2018).		

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## Review EPIC Notes to complete clinical evaluation

Clinical considerations:

- Has patient been seen by other providers.
- What condition is being treated.
- Changes in Health status that influence Anemia / EPO sensitivity.
- How quickly is Hemoglobin elevating (or not).
- How long ago was last EPO dose change.
- Recent transfusions.
- Patient compliance with getting EPO injections.
- Does patient have enough iron on board?
- Is patient energy level improving?

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## Contact the Patient

Ways to reach the patient:

### 1. Call the patient

- If patient prefers a call
- If a dose change is suggested

### 2. Send a Secure Message

- If the patient uses Secure Messaging and a dose change does not need to be discussed

### 3. Send a Letter

- If the patient is stable and has agreed to letters

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## How often to follow up with the patient?

- If we need to call the patient to discuss a possible EPO dose change and they are not immediately available, then leave a message.
- If the patient has not called back by the second business day, then attempt to call again. Try all listed numbers.
- If the patient has not called back by the fourth business day, then attempt to call again.
- If the patient has not called back within a week of getting the Complete Blood Count, then notify PCP and send an unable to reach letter.

# Documentation

Recent lab tests:

## HEMOGLOBIN

Date	Value	Ref Range	Status
09/20/2018	11.0 (L)	11.4 - 17.0 GM/DL	Final
09/14/2018	9.7 (L)	11.4 - 17.0 GM/DL	Final
09/06/2018	10.1 (L)	11.4 - 17.0 GM/DL	Final

## HEMATOCRIT

Date	Value	Ref Range	Status
09/20/2018	32 (L)	38 - 50 %	Final
09/14/2018	29 (L)	38 - 50 %	Final
09/06/2018	30 (L)	38 - 50 %	Final

## % SATURATION

Date	Value	Ref Range	Status
08/14/2018	26	15 - 50 %	Final

## FERRITIN

Date	Value	Ref Range	Status
08/14/2018	128	30 - 400 ng/mL	Final
05/15/2018	112	30 - 400 ng/mL	Final
04/03/2018	46	30 - 400 ng/mL	Final

Hgb 11.0 on 9/20/18

Current EPO dose: 2,000 units every TWO weeks since 9/4/18

Target Hgb: 10.5-11.5

Comments:

Anemia symptoms: Pt still gets tired easily from time to time

Acute medical conditions which may affect anemia: none

Compliance with EPO regimen: excellent

Plan:

Continue EPO 2,000 units SQ every 2 weeks, since 9/4/18.

Lab: CBC every 2 weeks (on around 10/4/18), Fe/TIBC & Ferritin every 3 months (11/2018).

Current iron supplementation: FES 325mg four times daily.

Transfusion History: none

Notes: Spoke with patient.

Per KP Anemia protocol/Hoi H Ho, RPh

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## Providers cannot see DAWN notes

EPIC documentation should include:

- Current lab results
- Current EPO dose
- Any relevant clinical considerations
- Updated plan of care
  - If EPO dose needs to be adjusted then AMS provider will enter the new dose in EPIC and cancel the previous order (either CAM or Rx).
  - Next labs can be ordered via either DAWN or EPIC.

## One Button Lab ordering in DAWN

DAWN is set to send a lab order to EPIC via LIS (signed by AMS medical director)

The screenshot shows the DAWN interface with a navigation bar at the top containing buttons for Interventions, Contacts, Letters, Drugs, Events, Procedures, and Reviews. The 'Letters' button is circled in red. Below the navigation bar, there is a dropdown menu for selecting a Direct Print (Local printer). A second dropdown menu is open, showing a list of custom messages to send:

- Select a custom message to send-
- CBC\_PLT\_DIFFAnemiaOrderMessage
- CBCOrderMsg
- CREOrderMsg
- TIBC\_OrderMessage
- FERRITIN\_OrderMessage

The date and time '09/17/2018 09:12:28 AM' are visible in the bottom right corner of the interface.

# Follow up for patients overdue for CBC

**List view**

R = referred to a colleague or team  
 c = change of phase of treatment plan is due  
 I = inactive phase of treatment plan  
 ! = flagged results  
 overdue = results have not been received or dealt with in the expected timeframe  
 (p) = letter sent previous to due date

Without  New labs (14d before today)

All  (All patients)

(All risk classes)

All  (All clinics)

On or Before  10/01/2018

**Worklist** | Non-attendance | Patients | Referrals | Reminders EPO | Messages

**Filter** Without New labs (14d before today)  
**Date** On or Before 10/01/2018  
 3 records found.

Ref	Con	Time	Appointment	Flag	Hospital No	National No	Last name	First Name
			10/01/2018					
			10/01/2018					
			10/01/2018					

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## Patient Care Representative (PCR) Contacts Patient

- If patient is 2 days late for CBC, Pt will get a courtesy reminder call that CBC was due.
- Pt will get 2 calls within the week. If no CBC by the next week, then the patient will get an overdue letter, and the PCP will be notified that the CBC is overdue.

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## How many patients can you do in a day?

- How long to manage a patient on EPO with New labs
  - Evaluate
  - Calculate dose
  - Contact patient
  - Complete Documentation

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## Things I wish DAWN did better

1. Double documentation between DAWN and EPIC can create a gap, and lead to errors.
2. With no Dosing Recommendations there is more room for intra-provider variability. This can lead to a lack of consistency.
3. For 'Other' tests, if the initial flags are not set correctly, DAWN will suggest 'Other labs' are overdue after 50 weeks, this means having to bypass things like "Ht", "Wt", "Pulse", "BPs", etc. This override time consuming.
4. Possible gap in communication if patient needs follow up between lab work (i.e. possible iron dose change or IV iron order).

What questions do you have for me?